7/19/88 C8900-1

■ THE INTERNATIONAL 500 • SAFE NUKES • MARC RICH TRIUMPHANT ■

AUGUST 1, 1988 $3.50

COMPUTER UPHEAVAL

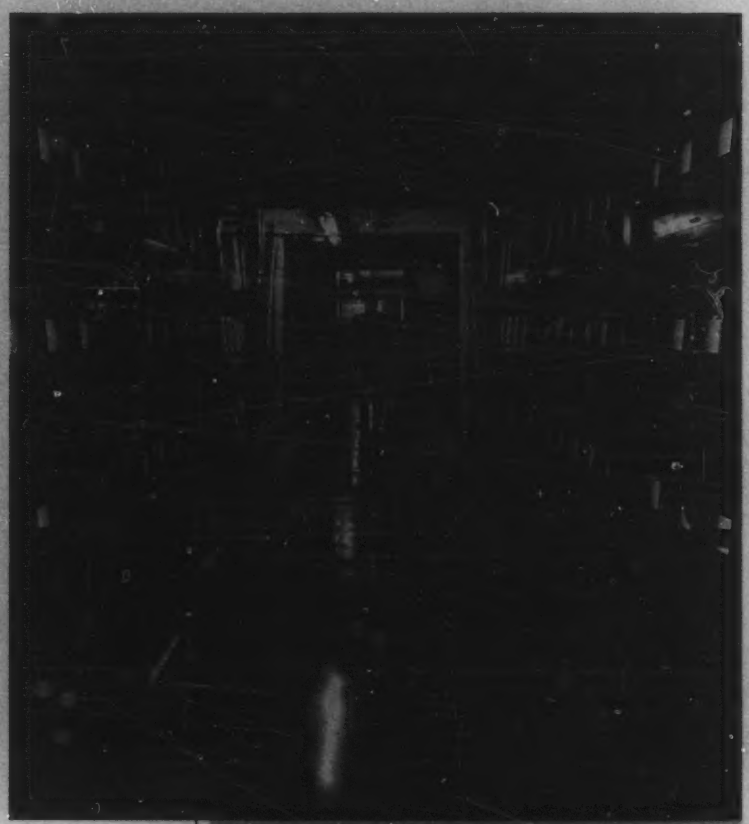
Brand Loyalty? Forget It. New Systems Are Shaking the Industry— and Changing the Way rk.

Apple's John Sculley is riding high on the PC boom

♦1836♦♦♦♦♦♦♦♦♦♦♦♦♦5-DIGIT 20814
♦S99ES520S9145 Y520814 JUN91
SRI CNGRSSN INFO SVC MDOD
4520 EAST-WEST HWY ♦D190837
BETHESDA MD 20814 PL00217

AUGUST 1, 1988

FORTUNE



COVER: Alan D. Levenson photographed Apple's CEO John Sculley holding the Knowledge Navigator, a prototype laptop computer.

If autos had developed like computers, a Rolls-Royce would cost $2.75 and go three million miles on a gallon of gas. PAGE 42

COMPETITION / COVER STORY

TREMORS FROM THE COMPUTER QUAKE 42

At age 40 the computer industry is undergoing a mid-life crisis brought on by two developments: the accelerating power of desktop microcomputers and customers' insistence that manufacturers figure out how to make their systems work together. The results will stand the $150-billion-a-year information-processing business on its ear. *by Stuart Gannes*

SCULLEY SOUNDS OFF ON APPLE AND THE INDUSTRY 60

CORPORATE PERFORMANCE

BACK TO THE FUTURE AT SATURN 63

Saturn's clean-sheet approach to building small cars has scaled back the technology in favor of people-intensive Japanese methods. The project may not pay off for GM even if Saturn goes off the charts. *by Alex Taylor III*

MONEY & MARKETS

WHY MARC RICH IS RICHER THAN EVER 74

The U.S. is offering a six-figure bounty for the capture of the fugitive commodities trader. Since fleeing to Switzerland five years ago, Rich has emerged as the world's largest metals trader. He flaunts his lavish lifestyle. *by Shawn Tully*

THE WORLD

VIETNAM REVISITED: TURN TO THE RIGHT? 84

Thirteen years after the fall of Saigon, General Secretary Nguyen Van Linh is eager for the Yanks—and others—to come back as business partners. But what would the U.S. be getting into this time? *by Colin Leinster*

TECHNOLOGY

TAKING FEAR OUT OF NUCLEAR POWER 105

Concern about the earth's rising temperature could turn a technological pariah into a savior. By coincidence, companies that build reactors are readying new models that offer greater margins of safety. *by Edmund Faltermayer*

THE OTHER WORRY: ATOMIC WASTE 114 *by Alicia Hills Moore*

VOL. 118, NO. 3

"Saturn is no longer an experiment. We're not a laboratory. We're not a social program. We're a business."

PAGE 63

"We've made more millionaires than any company I know."

PAGE 74

"We surround the city just as we did during the War of Liberation."

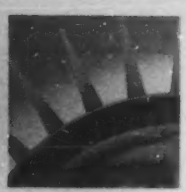
PAGE 84

"Of course there is cultural fallout when the Italian finds out he is making $40,000 less than the American."

PAGE 123

"I just keep thinking, how would *you* like to go 24 days without a drink of water?"

PAGE 137



The weak dollar has helped to make the U.S. the world's low-cost producer in many industries.

PAGE D48

EXECUTIVE LIFE

SHOULD YOU WORK FOR A FOREIGNER? 123

More Americans do these days because foreign companies are flush with cash and have a ravenous appetite for a slice of the U.S. Veterans offer a few tips: Check out the company's intentions before signing on. Learn the language. And keep mum about your salary. *by Faye Rice*

THE ECONOMY

WAITING FOR RAIN 137

It hasn't rained in Shabbona, Illinois, since May 23. A native goes back to the family farm to find crops struggling to survive on some of the nation's richest soil and farmers driven almost to distraction. *by Penny Ward Moser*

GOOD NEWS FOR BRAZIL, BAD NEWS AT THE SUPERMARKET 140

by Vivian Brownstein

INTERNATIONAL 500 (page 257)

THE WORLD'S BIGGEST INDUSTRIAL CORPORATIONS D1

FORTUNE's compilation of the world's top 50 companies.

THE INTERNATIONAL 500 D7

The FORTUNE directory of the largest industrials outside the U.S.

INDEX D35

THE BIGGEST BANKS D41

THE WORLD ECONOMY IN 36 CHARTS D48

DEPARTMENTS

EDITOR'S DESK 4

INDEX 6

NEWS/TRENDS 8

Clubs discover the joy of two sexes, revolt of the bondholders, and more.

FORTUNE FORECAST 25

Rising factory productivity is giving the expansion room to run. *by Maureen F. Allyn*

PERSONAL INVESTING 29

Happy times are coming for the companies that build factories. *by Andrew Evan Serwer*

Also: Foreign stocks, oil profits, and *Portfolio Talk* with Phoenix Fund's Robert Martorelli.

COMPANIES TO WATCH 72

FORTUNE PEOPLE 217

Leon Sullivan leaves the pulpit, Boone Pickens has trouble in school, and more. *by Terence P. Paré*

ON THE RISE 220

OTHER VOICES 223

Overeager lenders make for striking parallels between the Texas real estate boom and bust and the current boom in corporate restructurings and buyouts. *by Frederick E. "Shad" Rowe Jr.*

OFFICE HOURS 229

What do you do when you hit the high golden plateau? *by Walter Kiechel III*

LETTERS TO FORTUNE 241

KEEPING UP *by Daniel Seligman* 251

EDITOR-IN-CHIEF Jason McManus
CHAIRMAN AND CHIEF EXECUTIVE OFFICER J. Richard Munro
PRESIDENT AND CHIEF OPERATING OFFICER N. J. Nicholas Jr.
EDITORIAL DIRECTOR Ray Cave
CORPORATE EDITOR Gilbert Rogin

MAGAZINE GROUP
PRESIDENT Reginald K. Brack Jr.
GROUP PUBLISHERS S. Christopher Meigher III, Robert L. Miller
SENIOR VICE PRESIDENTS Richard W. Angle Jr., Michael J. Klingensmith, Richard B. Thomas

FORTUNE

Founder Henry R. Luce, 1898-1967

MANAGING EDITOR Marshall Loeb
EXECUTIVE EDITORS Richard Armstrong, Allan T. Demaree
ASSISTANT MANAGING EDITORS Walter Kiechel III, Ann M. Morrison
INTERNATIONAL EDITOR Donald D. Holt
ART DIRECTOR Margery Peters
PICTURE EDITOR Michele F. McNally
BOARD OF EDITORS Evelyn Benjamin, Charles G. Burck, Gene Bylinsky, Geoffrey Colvin, Julie Connelly, Edmund Faltermayer, Susan Fraker, Ann Hengstenberg, Keith R. Johnson, Richard I. Kirkland Jr. (European editor), Louis Kraar (Asian editor), Kenneth Labich, Carol Junge Loomis, Myron Magnet, Jeremy Main, Todd May Jr., Peter Petre, Stratford P. Sherman, Lee Smith (Washington)
ASSOCIATE EDITORS Maureen F. Allyn, Edward C. Baig, Rosalind Klein Berlin, Vivian Brownstein, John J. Curran, Marta F. Dorion, Ann Reilly Dowd (Washington), Joel Dreyfuss, Brian Dumaine, Jaclyn Fierman, Brett Duval Fromson, Stuart Gannes, Catherine Comes Haight, Gary Hector (Menlo Park, California), Christopher Knowlton, Andrew Kupfer, Patricia A. Langan, Colin Leinster, Alicia Hills Moore, Sylvia Nasar, John Paul Newport Jr., Peter Nulty, Brian O'Reilly (Los Angeles), Nancy J. Perry, Anthony Ramirez, Faye Rice, Louis S. Richman, Bill Saporito, Lenore Schiff, Patricia Sellers, Andrew Evan Serwer, Alex Taylor III, Shawn Tully (Paris), Monci Jo Williams, Wilton Woods, Ford S. Worthy (Hong Kong)
CONTRIBUTING EDITOR Daniel Seligman
REPORTERS Mark Alpert, Kate Ballen, Susan Caminiti, Carol Davenport, Darienne L. Dennis, Alan Deutschman, Alan Farnham, Carrie Gottlieb, Cynthia Hutton, Frederick Hiroshi Katayama, David Kirkpatrick, Sandra L. Kirsch, Julia Lieblich, Stephen Madden, Joshua Mendes, David J. Morrow, Terence P. Paré, Edward Prewitt, Charles A. Riley II, Ellen Schultz, William E. Sheeline, Julianne Slovak, Sarah Smith, Sally Solo (Tokyo), H. John Steinbreder
ART STAFF Renee Klein, Leo F. McCarthy (associate directors), Linda Eckstein, Frances Fifield, Jean Held, Joan Hoffman, Nai Lee Lum, Barbara R. Smyth (designers), Meher J. Dalal
PHOTOGRAPHY Elizabeth Cheng Krist, Eric Godwin (assistant picture editors), Maureen Duffy Benziger, Christopher E. Green, Prudence Heisler, Todd James
EDITORIAL OPERATIONS Donald G. Biglands (manager), Carol Gwinn (copy chief), Charles Blackwell (deputy), J. Randall Sizemore (technology chief), David Sloan (deputy), Karen Andrews, Charles J. Attardi, David Bain, Leslie Brenner, Leon A. Douglas, Edith Firoozi Fried, Anne Glusker, George J. Habit, Scott Kelliher, Daniel Lawrence, Michelle Lockhart, Janine A. Maeroff, Frances Owles, Mary Alice Rudovsky, Sara Solberg, Susan R. Visconti, Dennis Williams, David Wray
PRODUCTION Maureen Mallon Cluen (director), Guy Gleysteen (assistant manager)
EDITORIAL FINANCIAL MANAGER Cathy O'Brien
EXECUTIVE ASSISTANTS Anne Gut, Carolyn Sampson
EDITORIAL SERVICES Christiana Walford (director)

PUBLISHER James B. Hayes
GENERAL MANAGER Gregory J. Zorthian
CIRCULATION DIRECTOR Kenneth Godshall
BUSINESS MANAGER Merida Welles
CORPORATE PRODUCTION DIRECTOR Michael J. Clayton

U.S. ADVERTISING SALES DIRECTOR John E. Haire
MARKETING DIRECTOR Dennis E. Blank
PROMOTION DIRECTOR David L. Nimz
INTERNATIONAL ADVERTISING DIRECTOR Michael D. Dudley

EDITOR'S DESK

THE ARRIVAL of this issue will lay to rest for another year what has become something of an annual ritual among Japan's highly competitive press corps—trying to scoop FORTUNE's rankings of the world's largest industrial corporations outside the U.S. Slow down, fellows! The special section on *Gohyakusha Kigyo Banzuke*, as you call the FORTUNE International 500, begins on page 257.

ANDY FREEBERG

Writer Gannes working at home with his PC

The Japanese aren't the only ones anxious to see how they're faring. A South Korean chief executive once protested volubly at his company's exclusion. He would be on the list, we told him, if sales from his corporate subsidiaries were added, as they are in the U.S. He changed his bookkeeping and has been a fixture on the list for some years now.

Big differences in accounting methods throughout the world make international number crunching a particularly complicated job. Thus, 35 additional stringers from such places as Kuala Lumpur, Melbourne, Jakarta, and Rio de Janeiro joined our regular staff in Asia and Europe to collect all the figures. In New York the tables were painstakingly put together by reporters Fred Katayama, a Californian who recently returned from a four-year tour in our Tokyo bureau, and Bill Bellis. The whole project was supervised by international editor Don Holt and chief of reporters Evelyn Benjamin.

What's going on in the computer industry may be even more baffling than international accounting. Our cover story, beginning on page 42, imposes order on the flurry of announcements about new products and new alliances between manufacturers. Taken individually, these make sense only to the most perceptive industry analysts. Luckily, associate editor Stuart Gannes is such a person.

His report explains how the $150-billion-a-year computer industry, at age 40, is being shaken up by the arrival of both a powerful new generation of inexpensive desktop computers and the technology to do what customers increasingly demand—make systems built by different manufacturers work together. Says Gannes: "Suddenly computer companies are facing a totally different vision of what their customers expect and what their products should do. Old notions of how to make money in the computer business are being thrown out the window."

Gannes's earlier articles ranged from profiles of computer goliaths such as IBM and Hewlett-Packard to AIDS research and the crisis with the ozone layer. After his next assignment, his byline will be missing for a while. He has won a prestigious John S. Knight Journalism Fellowship at Stanford University and will be gone for about nine months. You'll be hearing from him soon after that—most likely telling us about the latest technology quakes in Silicon Valley.

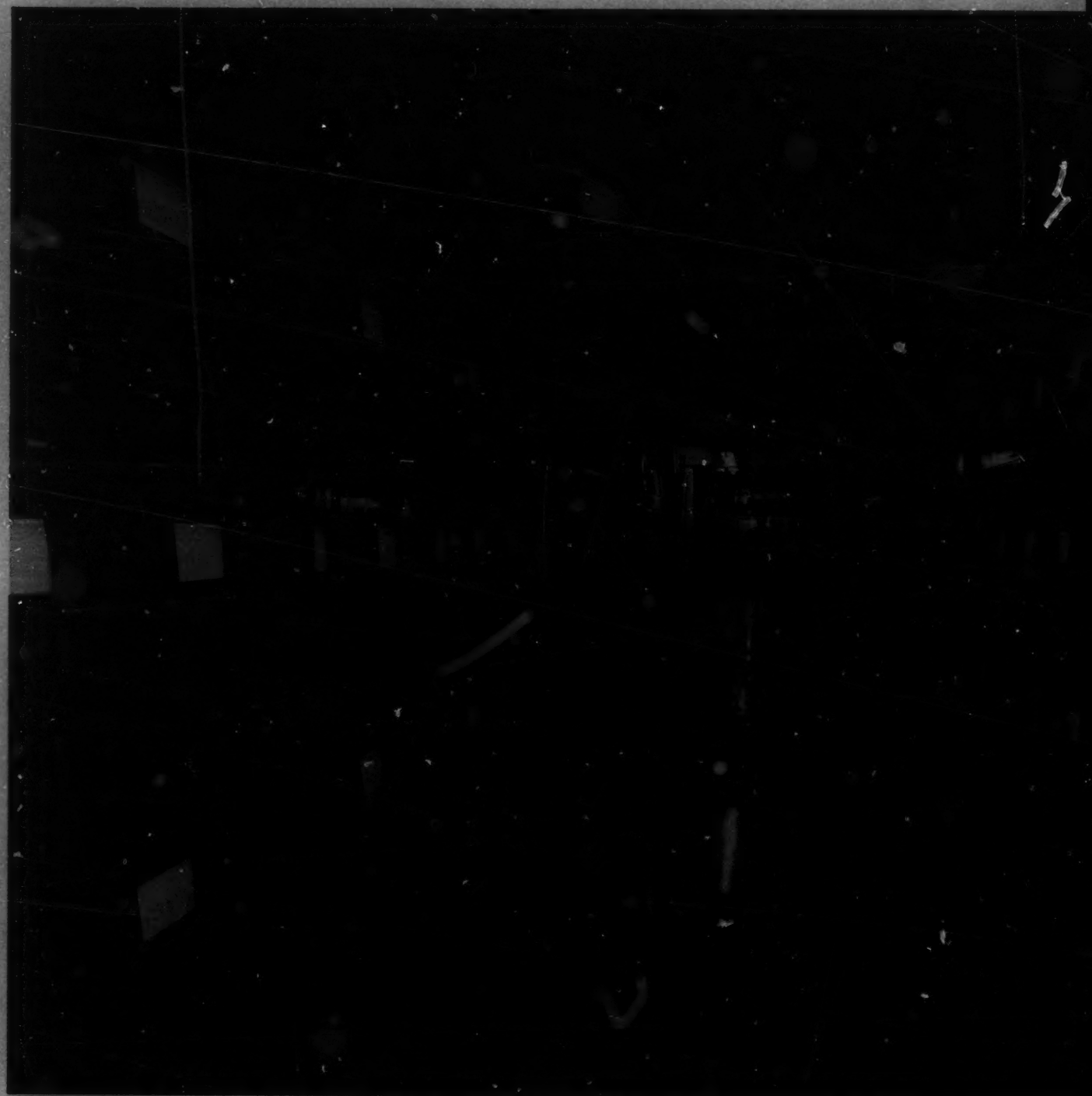
Marshall Loeb

MANAGING EDITOR

FORTUNE (ISSN 0015-8259). Published biweekly, with three issues in October, by Time Inc. Time Inc. principal office: Time & Life Building, Rockefeller Center, New York, NY 10020-1393. N. J. Nicholas Jr., President; Kevin D. Sense, Treasurer; William M. Guttman Secretary. Subscriptions: U.S., possessions: one year (27 issues) $47.97, Canada: one year (27 issues) $64.53. Second-class postage paid at New York, NY, and at additional mailing offices. Authorized as second-class mail by the Post Office Dept., Ottawa, Canada, and for payment of postage in cash. Member, Audit Bureau of Circulations. POSTMASTER: Send address changes to FORTUNE, P.O. Box 30604, Tampa, FL 33630-0604. © 1988 Time Inc. All rights reserved. FORTUNE is a registered mark of Time Inc.

COMPETITION/COVER STORY

TREMORS FROM THE



Bushels of Apple Macintoshes undergo final inspection at the company's automated assembly line in Fremont, California. Desktop machines like

PHOTOGRAPH BY MARK TUSCHMAN

COMPUTER QUAKE

...oom will be central to the new era of computing.

Radical changes are standing the No. 3 U.S. industry on its ear. They will transform the way we work. ■ *by Stuart Gannes*

JOHN SCULLEY, chairman of Apple Computer, turns to a VCR in his gadget-crammed office and pops in a cassette. "Let me show you how the Macintosh will work in a large corporate network," he says. On the videotape, a manager flicks on his computer and sees a diary entry for the day reminding him that one of his employees is due for a salary review. The manager types a password that links his desktop Mac to the company's mainframe computer, which handles personnel records. The Macintosh retrieves the files, runs a program that compares the employee's salary with those of his peers, and displays the results as a bar chart on the manager's screen. The manager decides how big a raise he wants to give and alerts the personnel and payroll departments electronically. Elapsed time: three minutes.

Declares Sculley: "That's a perfect example of where we think the industry is going. We're trying to create the links that will bring the desktop Macintosh into the mainstream of corporate computing."

What is remarkable about Sculley's demonstration is not how innovative it is but how overdue. Connecting different types of computer equipment seems so sensible that many customers have never understood why manufacturers didn't do it long ago. Bowing to pressure from companies that have accumulated a hodgepodge of often incompatible computers with brand names from Apollo to Zenith, the manufacturers are finally coming around.

The results will stand the $150-billion-a-year information-processing business on its ear. At age 40 the computer industry—now the third largest in the U.S., after only automobiles and oil—is undergoing a mid-life crisis brought on by two developments long in the making:

■ Desktop computers have become so powerful that they can perform many of the functions of their bigger minicomputer and even mainframe brethren.

■ Customers have become downright adamant that manufacturers figure out how to make their systems work together.

All the major U.S. computer makers, along with many of their Japanese and European competitors, are racing to develop systems that allow machines of different sizes and makes to communicate with each other effortlessly through vast networks. The companies are even cooperating with each other in the process—unthinkable only a few years back.

The industry that has transformed the way most people work is about to be transformed by the way most people *want* to work. The biggest beneficiaries: companies with strong positions in the desktop market, like Apple and IBM, and companies that link a variety of systems together, like Digital Equipment (DEC) and Hewlett-Packard. Computer makers that fail to adapt are likely to be taken over by larger, stronger competitors. (The boxes accompanying this article summarize the status of five key companies in the industry.) Customers too will profit by getting a fatter return on their investments in hardware and software.

As in earlier upheavals that redrew the map of the computer industry—the advent of minicomputers in the 1960s and of personal computers a decade later—the immediate catalyst for the turmoil is new technology. The jet engine opened a whole new era of aircraft design; similarly an advanced generation of lightning-fast microprocessors is revolutionizing desktop computing. Already reaching the market are powerful microcomputers that cost as little as $5,000 to $10,000 but that can handle large, complex tasks once reserved for machines 20 times more expensive.

Five years ago, right after the start of the personal computer revolution, industry experts observed that if the automobile business had developed like the computer business, a Rolls-Royce would cost $2.75 and go three million miles on a gallon of gasoline. Although today's microcomputers cost no more than those of 1983, their far more capable microprocessors offer the equivalent of ten times better gas mileage while allowing drivers to cruise in comfort

REPORTER ASSOCIATE *Mark Alpert*

at 250 mph. Even more astonishing, says Michael Homer, manager of business development at Apple: "The *rate* of improvement in microprocessor technology keeps increasing."

Breakthroughs in performance are opening up new markets for microcomputers. Many customers who have bought the souped-up new PCs to speed the work they have traditionally used PCs for—financial spreadsheets and word processing, for example—are discovering that desktop machines can handle all sorts of additional computing tasks, from engineering design to newsletter publishing. Says Homer: "As personal computers get more horsepower, more of the traditional functions of larger computers will keep falling into our price band, which is $10,000 and under. In fact, PCs are already a workable alternative to minicomputers for many companies."

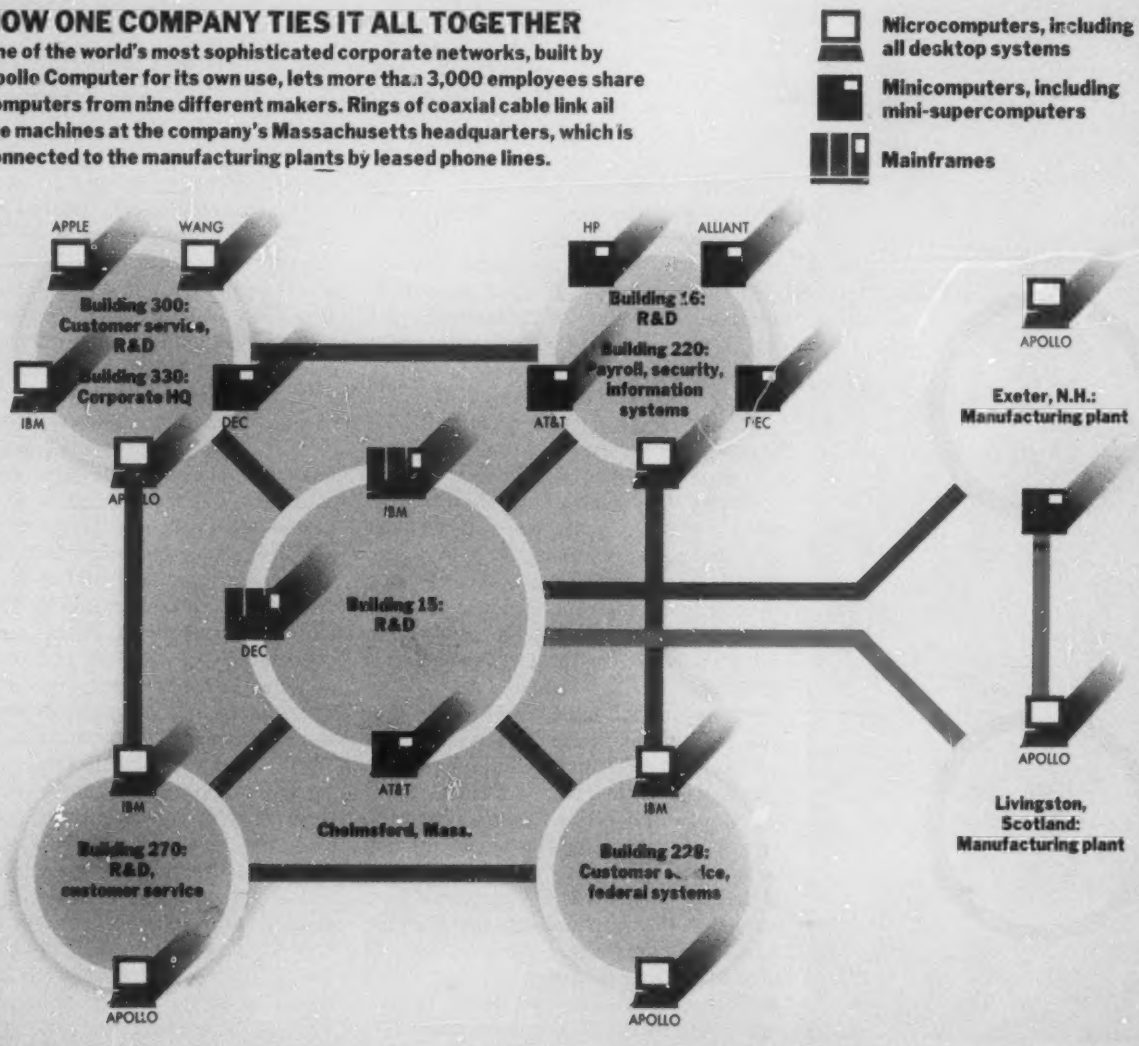
EQUALLY impressive is the increasing versatility of communications networks. Says John Young, chief executive of Hewlett-Packard: "The central reason customers haven't been getting as much value out of their computers as they would like is simply the inability to tie them together. That barrier is about to disappear."

Up-to-the-nanosecond networks like the one built by engineers at Apollo Computer of Chelmsford, Massachusetts, let thousands of Apollo employees in far-flung locations share data and software programs regardless of the basic compatibility of the machines they operate (see diagram below). With the network, a division manager using an Apollo workstation to prepare quarterly reports can instantly obtain sales data stored on Wang Laboratories systems in branch offices or get inventory figures from a Hewlett-Packard minicomputer at a manufacturing site.

For most companies the era of network computing is not yet a reality, but it is arriving with stunning speed. A strong synergy is emerging between the new desktop machines and modern computer networks. Each makes the other more useful and thus

HOW ONE COMPANY TIES IT ALL TOGETHER

One of the world's most sophisticated corporate networks, built by Apollo Computer for its own use, lets more than 3,000 employees share computers from nine different makers. Rings of coaxial cable link all the machines at the company's Massachusetts headquarters, which is connected to the manufacturing plants by leased phone lines.



ILLUSTRATIONS BY ELIOT BERGMAN INC.

more attractive. Computer industry analyst Mark Stahlman of the Wall Street investment firm of Sanford C. Bernstein estimates that in just four years sales of high-powered microcomputers, along with other components of highly integrated networks, have grown to constitute 10% of the computer business. What's more, they are increasing three times faster than the industry as a whole. "By the early 1990s these systems will account for the majority of growth in the industry," he says.

THE IMPLICATIONS for computer makers are clear. The spread of network computing has already benefited companies at the high-performance end of the desktop market such as Apollo and Sun Microsystems, both of which make powerful workstations used mainly by scientists and engineers. Now the technology revolution is toppling the longstanding business assumptions of dozens of larger manufacturers. Most important, the new networks will demolish the idea that customers must stay married to a single supplier simply because they have made an enormous investment in hardware, software, and training. When customers can link different brands of equipment with ease, they will be in a far stronger position to demand competitive bids.

Customers with advanced networks are also more likely to buy a variety of specialized computers, much as stereo enthusiasts mix amplifiers, tuners, CD players, tape decks, and speakers from different manufacturers to form a complete sound system. The trend has already begun with supercomputers, which are special-purpose machines built to serve large groups of users. More than 300 engineers share a Cray supercomputer at General Motors' research lab in Warren, Michigan, for aerodynamics studies and simulated crash testing.

As data links improve, the network idea will spread to other areas of computing—such as office automation systems, where specialized computers could coordinate the use of a company's printers, say, or route electronic-mail messages to assorted destinations. Says Sculley: "The single largest earthshaking fact in the industry right now is the shift to multiple suppliers of information systems. Customers are saying they want the best solution for each of the things they want to do."

None of the major players in the computer industry is perfectly positioned to take advantage of the intertwined trends to integrated networks and ever more powerful micros. Each company approaches the new era with a combination of strengths and weaknesses. Their strategies differ, but to a large degree they add up to a simple formula: Push for an advantage where you are strong, form an alliance where you are weak. This accounts for the bewildering array of recent lawsuits, joint ventures, and newly launched efforts to develop uniform communications standards.

A good example of the strategy is found at Digital, which excels in networking but has never been important in the PC market. Hence Digital's joint technology agreements with Apple and Compaq, two standouts in microcomputers. Even mighty IBM, which practically invented proprietary systems, is taking part in consortiums that promote industrywide solutions to problems of computer incompatibility.

With desktops emerging as the crown jewels of computerdom, personal computer manufacturers are hurrying to improve their machines, especially by adding networking capabilities. American businesses have bought more than 15 million personal computers. Less than 30% of them are hooked up to networks, but soon the great majority of them may be. "By 1991, 90% to 95% of our machines will be used in networks," says Bill Lyons, IBM's general manager of personal systems merchandising. Indeed a much ballyhooed feature of IBM's new PS/2 series of advanced personal computers, the so-called Micro Channel, helps the machines link up with IBM minicomputers and mainframes. The company contends that very shortly personal computers will not only be connected through local area networks, but also function as terminals for large data-processing systems.

From airline reservation desks to the factory floor, more than 20 million "dumb" terminals are in use throughout the U.S., serving as remote links to a mainframe computer. They're called dumb because they can't do any processing on their own, and to use them properly requires mastering strict rules and procedures. The latest personal computers, by contrast, use onboard microprocessors to run internal software that displays information and instructions far more simply.

Apple and other PC makers hope to seize a chunk of the dumb terminal market. Says Sculley: "There are two major differences between the last generation of personal computers and the models available today. The first is that the new PCs are far easier to use. The second is networking, which is a big part of how these machines will operate. When you get to sophisticated networking, if anything requires more performance than your computer has, you can farm it out to other machines on the network. The personal computer will become the epicenter of the whole industry."

SCULLEY, the intense ex-president of Pepsi-Cola brought to Apple by company founder Steve Jobs in 1983, is a leading apostle of the new style of network computing. In his autobiography, *Odyssey*, published last year, Sculley describes how he devised the Pepsi Challenge and adopted the 32-ounce bottle in an effort to "nullify a competitor's strength by changing the ground rules." At Apple, Sculley's first forays against IBM were focused on desktop publishing—an application that took advantage of the Macintosh's advanced graphics. He explains: "Desktop publishing was our Trojan horse. It got us in the door. We now have

TOTAL REVENUE (last four quarters)	**$55.3 BILLION**
HARDWARE SALES	
MICROS	**$4.9 BILLION**
MINIS	**$3.2 BILLION**
MAINFRAMES	**$16.4 BILLION**
STOCK PRICE	
JULY 1, 1987	**$164**
JULY 1, 1988	**$127**

OUTLOOK

The only player with a strong presence in all three computer markets, IBM is working hard toward making its machines talk to each other and to other companies' computers.

Chairman John F. Akers

infiltrated beyond that with personal productivity applications, like project management software. Now there are hundreds of thousands of dumb terminals that are going to get converted."

Certainly, with Sculley in charge, Apple is the most marketing-oriented competitor in the desktop business. And the Macintosh—Steve Jobs's legacy to Apple—comes closer right now to satisfying the requirements of network computing than any other desktop machine. In fact, the Mac's famed graphic displays and ease of use are widely imitated by other manufacturers—unlawfully, Sculley claims. Apple is suing Hewlett-Packard and software publisher Microsoft, complaining that they copied the distinctive "look and feel" of the Macintosh software in their own products. H-P and Microsoft deny the allegations.

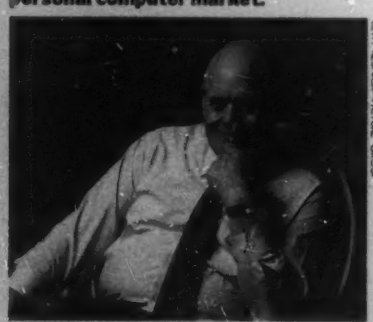
Whether Apple can take full advantage of its lead is not yet clear. Four years ago, in an untimely burst of enthusiasm, Sculley and Jobs dangerously overextended Apple by building huge inventories too far in advance of customer demand, and the company flirted with disaster. Now, most industry experts agree, Apple is primed for growth. Smith Barney computer analyst David Rearderman predicts that sales will increase 40% this year, to $3.8 billion. Sculley harbors even grander ambitions. "The next revenue milestone for Apple isn't $5 billion, but $10 billion. We hope to be there in the early 1990s."

DEC

TOTAL REVENUE (last four quarters)	**$10.8 BILLION**
HARDWARE SALES	
MICROS	**$343 MILLION**
MINIS	**$4.8 BILLION**
MAINFRAMES	**$447 MILLION**
STOCK PRICE	
JULY 1, 1987	**$165**
JULY 1, 1988	**$114**

OUTLOOK

The leading supplier of minicomputers wants to build large corporate computing networks. Its continuing weakness: an inability to crack the personal computer market.



SETH RESNICK—PICTURE GROUP

President Kenneth Olsen

FOR COMPANIES that are already big, networks may be the most exciting growth opportunity. Designing and maintaining large communication systems that permit hundreds, even thousands, of computers to communicate and share data could be an $18-billion-a-year business by 1992, according to the Gartner Group, a market research firm in Stamford, Connecticut. Virtually every large company, from manufacturing concerns to financial service enterprises, will require these systems. Insists Unisys Chairman W. Michael Blumenthal: "The ability to do well in the industry will not depend on who builds the best machine for the desktop, because it will be a fairly standard machine. The gravy is in connecting everything and being able to service and support the multimachine networks." He says Unisys's $310 million acquisition last year of Timeplex, a leading supplier of networking equipment, was a major step in that direction.

At rival Digital, President Kenneth Olsen claims: "Networking is the biggest opportunity for us. We picked that area 15 years ago." Digital has indeed been a leader in networking within its own product line. The company's internal network, which links 27,000 machines in 66 nations from the U.S. to Israel to Japan, may well be the most sophisticated in the world. Olsen compares it to an electric-power grid: "We can plug computers in like generators and send processing power wherever it's needed. When we run out of computing capacity on the East Coast in the morning, our network automatically absorbs more from the West Coast."

Digital's elegant network suffers from one crucial shortcoming, perhaps the price of pioneering. Many of its most powerful features will not work with computers made by other manufacturers. Unfortunately for Digital, as Hewlett-Packard's Young puts it, "when you walk in the door,

UNISYS

TOTAL REVENUE (last four quarters)	**$9.7 BILLION**
HARDWARE SALES	
MICROS	**$246 MILLION**
MINIS	**$1.1 BILLION**
MAINFRAMES	**$2.7 BILLION**
STOCK PRICE	
JULY 1, 1987	**$41**
JULY 1, 1988	**$36**

OUTLOOK

As sales growth slows for the company's Burroughs and Sperry mainframes, Unisys hopes to sell more desktops and networking equipment. The likeliest route: acquisitions.

CRAIG FORTIN

Chairman W. Michael Blumenthal

you don't find any customers with nothing. They all have lots of different somethings." Communications links, where they exist at all, are fairly crude. In most cases customers send information back and forth awkwardly, like semaphore operators at sea in a storm. Software that works on one make of machine often will not run on another.

THE BENEFITS of tightly integrated information networks are many. They eliminate the inefficiencies of maintaining multiple training staffs and software. In the future, say industry experts, networks will function as the brains and central nervous system for all the specialized information processing that goes on in large enterprises. The first great wave of computerization in the 1960s and 1970s consisted largely of automating complex manual systems, such as payroll and accounting. Then, as computers improved, individual departments, manufacturing divisions, and branch offices of large companies bought a variety of new computers to

perform more specialized jobs—such as running an assembly line or producing a magazine. In the third wave, advanced networks could join these islands of automation together seamlessly.

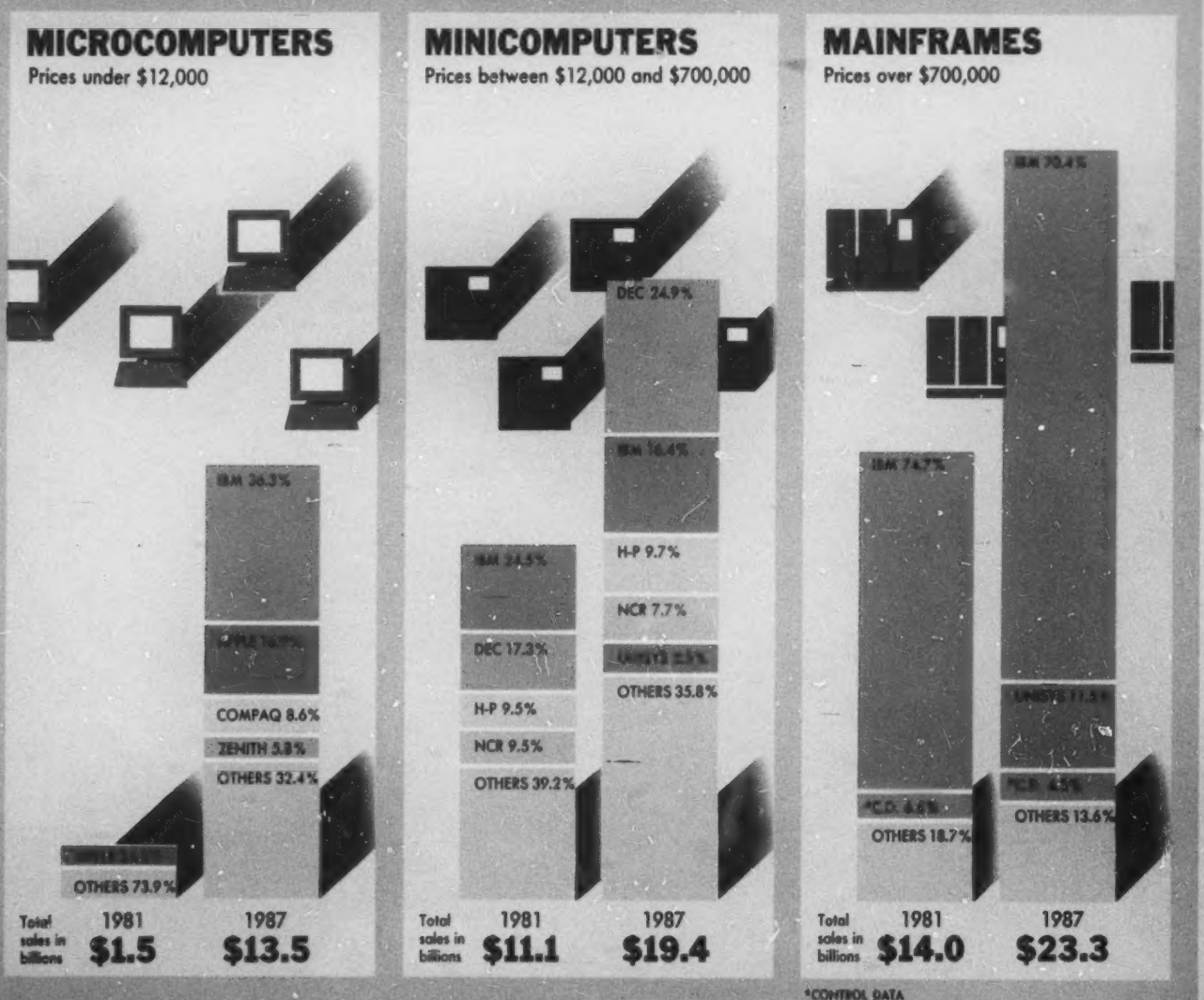
BUT NOT without some practical problems. For example, many users of today's computer networks are dangerously vulnerable to the latest scourge of the industry: computer "viruses." These are essentially rogue programs designed by hackers and sneaked into other software to wreak havoc on the innards of every computer they infect. The most virulent viruses instruct a machine to erase useful data, or even to crash altogether. Although networks are not the culprits, they can act as innocent carriers, spreading a virus from one machine to another. Industry experts say that future network equipment will have to be equipped with "vaccine" programs that detect computer viruses and prevent their transmission.

Customers who dream of networking nirvanas sometimes awaken unpleasantly to the complexities of the job. Those who persist can end up paying dearly for workable solutions. Even the most basic plans may take months, or years, to put in place. Last year chemical maker Du Pont, which buys computers from IBM, Digital, and Hewlett-Packard, decided to set up a unified electronic-mail system for its employees. Getting the three unique networks to exchange messages with each other cost more than $1 million in addition to the basic software for the project.

One major obstacle has barred the way

THE LAST STRIVES TO BE FIRST IN A BOOMING MARKET

Sales of microcomputers by the top 100 U.S. makers are growing faster than any other segment of the industry, and will soon surpass those of minicomputers. IBM dominates mainframes and micros but has lost market share—and leadership—in minis.



SOURCE: GARTNER GROUP YANKEE TECK

to establishing truly flexible networks: lack of uniform standards. Manufacturers of telephone-answering devices, fax machines, or even switching systems for whole cities recognize that their products must share a common network. With computers, by contrast, a multitude of products is already in use and the problem is to design a network that can accommodate them. Creating a network to handle the rat's nest of incompatible machinery already out there is both a technological challenge and a diplomatic nightmare. Seemingly neutral decisions can tilt the advantage to one manufacturer over another. For example, computer companies cannot agree on specifications for universal electronic-mail systems largely because each manufacturer favors a design that would minimize the amount of reengineering necessary for its own existing system.

Operating systems present an even tougher puzzle. These sets of computer instructions control a variety of machines, from desktop workstations to supercomputers. For the past five years, AT&T has claimed it had the best candidate for a common operating system in Unix, invented by scientists at Bell Labs in the late 1960s. AT&T licensed it freely. The prime attraction of Unix is that it works on lots of different computers, which makes it ideal for networking. (By contrast, the MS-DOS operating system used on most personal computers is inflexible. It functions only on machines built with microprocessors designed by a single manufacturer, Intel.) There is just one hitch: AT&T is no longer on the sidelines of the computer industry. The main reason AT&T agreed to spin off its Bell operating companies in 1984 was to get into the computer business.

THE POPULARITY of Unix increased during the early 1980s. Other computer companies did not mind selling AT&T's product, because they considered the reconstituted phone company a feeble competitor. Its first computers, introduced in 1984, flopped. But the scoffing ceased abruptly last year, when AT&T set up a partnership with Sun Microsystems to improve Unix and build a new line of computers based on Sun's high-performance microprocessors. Says Nina Lytton, an analyst for the Yankee Group in Boston: "Suddenly the industry saw AT&T and Sun as a competitive Janus—specifying standards with one face and selling them with the other. Worse, it looked as though Sun would be able to exploit its close relationship with AT&T to get its own Unix-based computers to market faster."

HEWLETT-PACKARD

TOTAL REVENUE (last four quarters)	**$9.0 BILLION**
HARDWARE SALES	
MICROS	**$625 MILLION**
MINIS	**$1.9 BILLION**
MAINFRAMES	**None**
STOCK PRICE	
JULY 1, 1987	**$60**
JULY 1, 1988	**$55**

OUTLOOK

The well-regarded minicomputer maker wants to win big in the hot market for technical computers. But it faces stiff competition from DEC and young rivals like Sun and Apollo.

TOM ZIMBROFF

Chief Executive John Young

In May seven of AT&T's biggest competitors rebelled. Led by Digital, Hewlett-Packard, and IBM, they contributed $90 million to finance a consortium called the Open Software Foundation, which is developing an alternative to Unix. Now the two factions are at a standoff, each claiming to be more "open" than the other. Frustrated customers predict the impasse will drag on for a long time.

For decades efforts to develop broad networking standards have been stymied by competitive considerations. There are no fewer than 23 world standards organizations, including the Corporation for Open Systems—itself a coalition of 17 leading computer makers and dozens of major customers. All 23 groups demonstrated a number of prototype communications standards in June at a splashy convention in Baltimore called Enterprise '88. But the $50 million event disappointed customers who came to shop for equipment that works right now. They found precious little to buy. Industry experts concede that developing a full range of standards-based products will take years.

Some of the largest computer companies are jumping into the gap with their own solutions. IBM has been working for more than two years on a design project called Systems Application Architecture, or SAA. Its twin goals: to provide links to other manufacturers' products and to permit IBM's own diverse computer lines to be integrated for the first time. Says Michael Killen, a Palo Alto, California, computer consultant who has just written a book called *IBM: The Making of the Common View*: "The importance of this strategy for IBM cannot be overestimated. It is the company's response to the lead that its competitors have built up in networking. Without SAA, you could write IBM off."

WITH IT, IBM stands to become much more competitive than it is today. SAA promises to cure IBM's biggest weakness, the incompatibilities among its mainframe, mini, and personal computers. Its highly regarded new generation of products, including the PS/2 personal computers and the AS/400 line of minicomputers unveiled in June to considerable Wall Street applause, are designed to work in large corporate networks and to run the same software.

Digital and Hewlett-Packard are also working hard to broaden their networking capabilities to include other companies' products. Says Peter Smith, Digital's vice president of product marketing: "We can concentrate on integrating other folks' equipment because we don't have to worry about incompatibilities in our own product line." Digital has already introduced links to other computer makers' systems, particularly IBM's. Hewlett-Packard offers similar connections for its customers. Says John Young: "We decided more than five years ago to abandon our proprietary networking schemes. Today we have the widest range of networking capabilities of any company in the world."

The demand for standards transcends networking. Customers hope that standards will make rival machines essentially interchangeable and pave the way for competitive bidding on large purchases. The seeds of this idea were sown in personal computers when the de facto IBM standard created

a huge opportunity for Compaq and other clonemakers to plunge in and compete for a piece of the business. Now the federal government—which buys $17 billion of computers a year, making it the biggest customer in the world—and other major users like General Motors and Boeing are calling for "open" standards.

LAST YEAR, for example, the U.S. Air Force declared that all bidders for a $4.5 billion computer contract had to offer machines that could run the Unix operating system. Infuriated, Digital protested to the Federal Board of Contract Appeals. When the board ruled for the Air Force, Digital withdrew from the competition. Sniffed Olsen: "There is no sense in bidding on a contract that is filled with arbitrary, useless specifications. People without any job to be done don't make good computer customers. The Air Force will never fight a war so they don't really care."

Other minicomputer makers, like Prime, Wang, Data General, and Tandem, cannot afford to be so haughty. Their profits have weakened in recent months. They are eager to support Unix—or any other standard the industry can agree on. Says Data General's Tom West, whose design team was the subject of Tracy Kidder's 1981 best-seller, *The Soul of a New Machine*: "We're starting over with a clean slate. At some point you have to break with the past."

For all the problems companies face in adjusting to revolutionary change, in the future the information-processing market as a whole may grow faster than ever. In a world of networking, desktop computers will be the only general-purpose machines that customers buy. Companies that hope to sell larger or more specialized computers will have to make machines that significantly outperform their competitors'. Inevitably, too, as customers gain greater leverage over their suppliers, computer makers' profit margins will decline even as product development expenses rise. That's a natural situation for industrywide consolidation. The 1986 merger of Burroughs and Sperry to form Unisys marked the opening of a new round of mergers and acquisitions. Others will certainly follow.

For the moment Apple is in the best position to turn the forces shaping the industry to its own advantage. Just as the spread of mainframes and minicomputers transformed IBM, Digital, and Hewlett-Packard into towering giants, the new era of network computing could just elevate Apple—the most innovative personal computer company—to the top ranks of the industry by the year 2000. F

APPLE

TOTAL REVENUE (last four quarters)	**$3.3 BILLION**
HARDWARE SALES	
MICROS	**$2.3 BILLION**
MINIS	**None**
MAINFRAMES	**None**
STOCK PRICE	
JULY 1, 1987	**$40**
JULY 1, 1988	**$47**

OUTLOOK

Potentially the biggest beneficiary of the trend to desktop computers, its chief product, the company must prove that its machines are useful additions to large corporate networks.

ALAN D. LEVENSON

Chairman John Sculley

SCULLEY SOUNDS OFF ON APPLE AND THE INDUSTRY

Five years after Steve Jobs challenged him to stop selling soft drinks at PepsiCo and start changing the world, Apple CEO John Sculley has decided to take advantage of an employee perk and enjoy a nine-week paid leave. Some pre-sabbatical thoughts:

On the sabbatical:

I'm essentially an intuitive leader, and you can only be intuitive about something you understand. One of the problems I had when I first came to Apple was that I didn't know enough to be intuitive. I had to learn the technology, the company, and the industry. This is my first chance to step back and reflect.

On industry trends:

The industry has come to agree on the need for standards in communications and networking. Once companies get sophisticated networks, they will be connecting people to them, not just computers, and that's what Apple does best: connecting people to information.

On IBM:

IBM is an extraordinarily fine company, but it faces the most challenging task of any computer company in the years ahead. Management senses the earthshaking fact that the industry is shifting from a single-supplier world to a multisupplier world. They're trying to recast their corporation to compete in it.

On Digital:

People have underestimated Digital. Even when Ken Olsen's views were unpopular, he was unwavering in his vision. He was the first to understand the crucial importance of networks. If Digital stays focused on turning corporate networking into a reality, it will be even more successful than it already is.

On Hewlett-Packard:

The hallmark of Hewlett-Packard is customer loyalty, and that will continue as long as the company offers high-performance minicomputers. But in desktop machines, it is not as aggressive in marketing as some of its competitors.

On the future:

In this industry great products are only pieces of the foundation. Now we've got to do what Alfred Sloan did at General Motors. We've got to put the pieces together and envision what corporations are going to look like in the future. The successful ones are not going to look anything like what we've seen in the past. And I think I can help shape a corporation, not just the products.

FORTUNE

THE FORTUNE INTERNATIONAL 500

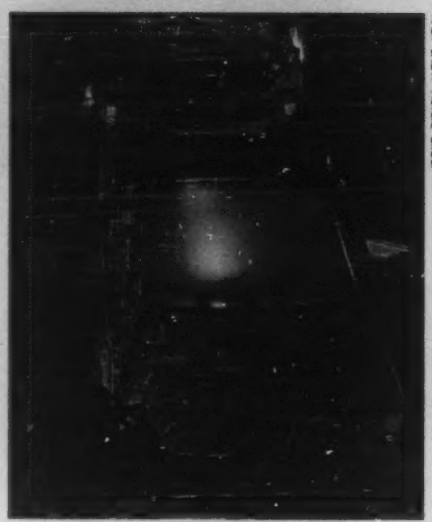
CONTENTS

THE WORLD'S 50 BIGGEST INDUSTRIAL CORPORATIONS D1
THE INTERNATIONAL 500 ..... D7
WHO DID BEST AND WORST D29
ALPHABETICAL INDEX TO THE INTERNATIONAL 500 ..... D35
THE 100 BIGGEST COMMERCIAL BANKING COMPANIES D41
THE WORLD ECONOMY IN CHARTS D48

THE WORLD'S 50 BIGGEST INDUSTRIAL CORPORATIONS

NOT MUCH moves and shakes in the world without them. The 50 biggest industrial companies employ 8.8 million people, more than the population of Sweden. They generated sales in 1987 of $1.5 trillion. Profits totaled $56 billion, nearly twice the gross national product of Ireland. These companies set the styles, invest the money, build the plants—sometimes altering the economies and ecologies of vast regions.

FORTUNE's compilation of the world's top 50 draws from both the International 500 (beginning on page D7) and the list of the 500 biggest industrial companies in America, which was published April 25. It is a unique snapshot that shows just how balanced the global economy is. Twenty companies are American, 20 European, only one is from the Southern Hemisphere, and nine are Asian (you guessed it—eight are Japanese and the other is Korean).



ANDY SNOW–PICTURE GROUP

Honda makes sparks fly in Marysville, Ohio.

The companies are, for the most part, legacies of the industrial and technological revolutions of the last century and the early years of this one. Many are named for entrepreneurs who jumped into fledgling industries—automobiles, electricity, aviation—at a time when even visionaries could not imagine their companies' potential.

So entrenched are these industrial giants that the mainstays—General Motors, Royal Dutch/Shell, Exxon, Ford, Toyota, Du Pont, Unilever--appear year after year in roughly the same order. Even at the margins, though, changes illuminate broad trends. USX dropped off the list since last year, underscoring the continuing contraction of the once mighty American steel industry. So did Thyssen, the West German steelmaker, exemplifying similar problems on the Continent. The oil business's ongoing recession knocked off Kuwait Petroleum and Total, the French refiner. Among the newcomers were two electronics companies: NEC, Japan's biggest manufacturer of personal computers, and CGE, the French conglomerate that produces everything from nuclear plants to telephones. CGE's acquisition of ITT's European telecommunications operations lifted it to No. 30.

As a group, the top 50 turned in a robust performance, reflecting the continued growth of the world economy in 1987. Reversing last year's declines, sales increased 14% and profits 17%. The auto and electronics industries led the way, but nothing contributed more than the weak U.S. dollar.

For the second consecutive year, the dollar drifted lower in relation to the yen and major European currencies. The decline worked wonders on some otherwise drab numbers. Daimler-Benz's modest revenue increase of 3% in deutsche marks, for instance, translated into 24% in U.S. currency. Because the Korean won moved down more or less with the dollar, Sam-

Communications satellite (right) built by General Electric will beam TV programs across Europe. Blue cones absorb sound during tests.

PHOTOGRAPH BY JOE MCNALLY

sung was able to undersell Japanese competitors in the U.S. market for hot consumer items such as microwave ovens.

Foreign carmakers had a remarkable year, with sales rising 27%. The Japanese held on to the fast lane. Toyota Motor turned 50 years old but showed no signs of slowing down. It cracked the top ten with a 31% burst in sales. Honda Motor, whose sales soared 38%, entered the top 50 for the first time, at No. 39. Its highly successful Acura won raves from auto critics as well as investors.

Restructuring helped France's Renault bounce back. A loss of $840 million in 1986 turned into a $610 million profit last year. Rival Peugeot also improved its standing by doubling earnings. In Italy, Fiat's takeover of IRI's Alfa Romeo helped it move up ten places to No. 17, past Chrysler and Nissan. On the strength of rising domestic car sales, Volvo squeezed onto the list as No. 50.

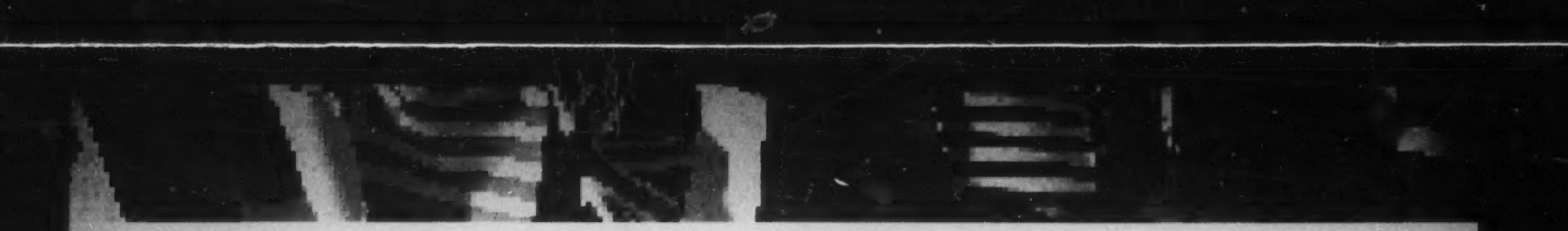
In Detroit, Ford and Chrysler did a creditable imitation of their overseas counterparts. Brisk sales of Ford's stylish Taurus cars helped drive up profits 41%. Chrysler acquired American Motors and increased sales by 17%. Only General Motors lagged behind. Though GM held on to its No. 1 rank as the biggest company in the world, it continued to lose market share.

ELECTRONICS COMPANIES had a dynamic year. General Electric's 12% rise in sales helped the company remain the biggest in its industry. More impressive was GE's 17% increase in net income. AT&T's revenue fell a bit, but its restructuring raised profits a remarkable 15-fold. Non-American companies had even better sales increases, owing in large part to the weakness of the dollar. All advanced in rank except Philips of the Netherlands and Matsushita Electric Industrial of Japan. Philips's large

THE TOP 50

RANK 1987	'86	COMPANY	HEADQUARTERS	INDUSTRY	SALES $ Millions	PROFITS $ Millions
1	1	GENERAL MOTORS	DETROIT	MOTOR VEHICLES	101,781.9	3,550.9
2	3	ROYAL DUTCH/SHELL GROUP	LONDON/THE HAGUE	PETROLEUM REFINING	78,319.3	4,725.8
3	2	EXXON	NEW YORK	PETROLEUM REFINING	76,416.0	4,840.0
4	4	FORD MOTOR	DEARBORN, MICH.	MOTOR VEHICLES	71,643.4	4,625.2
5	5	INTERNATIONAL BUSINESS MACHINES	ARMONK, N.Y.	COMPUTERS	54,217.0	5,258.0
6	6	MOBIL	NEW YORK	PETROLEUM REFINING	51,223.0	1,258.0
7	7	BRITISH PETROLEUM	LONDON	PETROLEUM REFINING	45,205.9	2,280.1
8	12	TOYOTA MOTOR	TOYOTA CITY (JAPAN)	MOTOR VEHICLES	41,455.0	1,699.6
9	11	IRI	ROME	METALS	41,270.0	146.5
10	8	GENERAL ELECTRIC	FAIRFIELD, CONN.	ELECTRONICS	39,315.0	2,915.0
11	13	DAIMLER-BENZ	STUTTGART	MOTOR VEHICLES	37,535.5	970.2
12	10	TEXACO	WHITE PLAINS, N.Y.	PETROLEUM REFINING	34,372.0	(4,407.0)
13	9	AMERICAN TEL. & TEL.	NEW YORK	ELECTRONICS	33,598.0	2,044.0
14	14	E.I. DU PONT DE NEMOURS	WILMINGTON, DEL.	CHEMICALS	30,468.0	1,786.0
15	18	VOLKSWAGEN	WOLFSBURG (W. GER.)	MOTOR VEHICLES	30,392.7	242.1
16	19	HITACHI	TOKYO	ELECTRONICS	30,332.2	617.3
17	27	FIAT	TURIN	MOTOR VEHICLES	29,642.8	1,830.2
18	25	SIEMENS	MUNICH	ELECTRONICS	27,462.9	649.6
19	15	MATSUSHITA ELECTRIC INDUSTRIAL	OSAKA	ELECTRONICS	27,325.7	862.4
20	16	UNILEVER	LONDON/ROTTERDAM	FOOD	27,128.8	1,278.6
21	21	CHRYSLER	HIGHLAND PARK, MICH.	MOTOR VEHICLES	26,257.7	1,289.7
22	22	PHILIPS' GLOEILAMPENFABRIEKEN	EINDHOVEN (NETH.)	ELECTRONICS	26,021.2	316.9
23	17	CHEVRON	SAN FRANCISCO	PETROLEUM REFINING	26,015.0	1,007.0
24	26	NISSAN MOTOR	TOKYO	MOTOR VEHICLES	25,650.5	123.9
25	31	RENAULT	PARIS	MOTOR VEHICLES	24,539.7	613.7

U.S. EUROPE ASIA SOUTH AMERICA • NOT ON LAST YEAR'S LIST



American sales dampened the boost it might have received from the dollar. Toshiba's sales inched down 2% in yen but rose 36% in dollars, propelling the company ten ranks higher. Power systems generated big sales for Hitachi of Japan and West Germany's Siemens. A $1.9 billion nuclear power plant Siemens built in Brokdorf, West Germany, helped the company boost revenues 35%. Samsung's strong performance in producing inexpensive chips and home appliances lifted its revenues.

Chemical industry sales were generally strong all over the world, helping push up Du Pont's sales 12% and profits 16%. Britain's Imperial Chemical Industries increased revenues 9% and profits a handsome 36%. ICI benefited from two recent American acquisitions, Glidden Paints and Stauffer Chemicals. Sales of West Germany's BASF fell almost 1% in deutsche marks but rose 20% in dollars, enough to lift the company three places to No. 26. Though oil prices remained depressed, sales rose 9% at Exxon and 8% at Royal Dutch/Shell. But the titans traded places. Mostly because of differences in exchange rates, Shell took over Exxon's spot as No. 2 company in the world.

The oil business produced the top 50's biggest money loser: Texaco. The company, which agreed to settle its bitter suit with Pennzoil for $3 billion, reported a $4.4 billion loss for the year. Joining Texaco on the loser's list was Tenneco, the Houston-based conglomerate that started as a pipeline company in the 1940s and has branched into oil and gas production, chemicals, packaging, farm machinery, and shipbuilding. Among non-U.S. companies, only Nippon Steel lost money. Now that the strong yen has weakened its ability to offer competitive prices, the company is trying to diversify into computers.

– **Frederick Hiroshi Katayama and William Bellis**

RANK 1987	'86	COMPANY	HEADQUARTERS	INDUSTRY	SALES $ Millions	PROFITS $ Millions
26	20	**ENI**	ROME	PETROLEUM REFINING	**24,242.5**	**483.6**
27	23	**NESTLÉ**	VEVEY (SWITZERLAND)	FOOD	**23,625.9**	**1,224.8**
28	29	**BASF**	LUDWIGSHAFEN (W. GER.)	CHEMICALS	**22,383.7**	**584.7**
29	24	**PHILIP MORRIS**	NEW YORK	TOBACCO	**22,279.0**	**1,842.0**
30	•	**CGE (CIE GÉNÉRALE D'ÉLECTRICITÉ)**	PARIS	ELECTRONICS	**21,204.3**	**304.8**
31	33	**ELF AQUITAINE**	PARIS	PETROLEUM REFINING	**21,186.4**	**690.2**
32	35	**SAMSUNG**	SEOUL	ELECTRONICS	**21,053.5**	**249.3**
33	28	**BAYER**	LEVERKUSEN (W. GER.)	CHEMICALS	**20,662.2**	**833.3**
34	31	**HOECHST**	FRANKFURT	CHEMICALS	**20,558.1**	**766.6**
35	42	**TOSHIBA**	TOKYO	ELECTRONICS	**20,378.1**	**213.8**
36	30	**AMOCO**	CHICAGO	PETROLEUM REFINING	**20,174.0**	**1,360.0**
37	41	**PEUGEOT**	PARIS	MOTOR VEHICLES	**19,658.2**	**1,116.1**
38	43	**IMPERIAL CHEMICAL INDUSTRIES**	LONDON	CHEMICALS	**18,232.8**	**1,245.8**
39	•	**HONDA MOTOR**	TOKYO	MOTOR VEHICLES	**17,237.7**	**516.2**
40	38	**UNITED TECHNOLOGIES**	HARTFORD	AEROSPACE	**17,170.2**	**591.7**
41	40	**OCCIDENTAL PETROLEUM**	LOS ANGELES	FOOD	**17,096.0**	**240.0**
42	39	**PROCTER & GAMBLE**	CINCINNATI	SOAPS, COSMETICS	**17,000.0**	**327.0**
43	45	**ATLANTIC RICHFIELD**	LOS ANGELES	PETROLEUM REFINING	**16,281.4**	**1,224.3**
44	34	**RJR NABISCO**	ATLANTA	TOBACCO	**15,868.0**	**1,209.0**
45	44	**PETROBRÁS (PETRÓLEO BRASILEIRO)**	RIO DE JANEIRO	PETROLEUM REFINING	**15,640.5**	**171.5**
46	36	**BOEING**	SEATTLE	AEROSPACE	**15,355.0**	**480.0**
47	•	**NEC**	TOKYO	ELECTRONICS	**15,325.1**	**94.0**
48	46	**TENNECO**	HOUSTON	PETROLEUM REFINING	**15,075.0**	**(218.0)**
49	•	**NIPPON STEEL**	TOKYO	METALS	**14,639.8**	**(69.7)**
50	•	**VOLVO**	GÖTEBORG (SWEDEN)	MOTOR VEHICLES	**14,576.0**	**730.4**
		TOTALS			**1,504,492.5**	**56,735.1**

THE INTERNATIONAL 500

THE FORTUNE DIRECTORY OF THE BIGGEST INDUSTRIAL CORPORATIONS OUTSIDE THE U.S.

THE FORTUNE International 500 had a dazzling year despite the October stock market crash. Sales for the biggest non-American industrial companies in 1987 rose 20%, and net income soared 51%. The biggest earnings gains came in Europe, where companies benefited from a wave of restructuring and tax cutting.

Japan's major exporting companies bounced back strongly after struggling for two years to keep up margins in the face of the strong yen. But since most have fiscal years ending in the first half, the full impact of their recovery won't be felt until 1988. Then, watch for a tsunami of profits rolling out of the East.

The weakness of the dollar against the yen and major European currencies in 1987 accounted for part of the increases, but higher productivity was also a factor. As sales went up, employment dropped by 1%. The continuing strength of the U.S. economy, which still acts as a locomotive for the rest of the world, helped too.

The Japanese dominate the *Gohyakusha Kigyo Banzuke*, as the FORTUNE list is known among Tokyo executives. With 157 companies, Japan has more than double the number of runner-up Britain. Seven newcomers arrived this year, and four Japanese companies that had dropped off returned (see page D31). One new entry is a familiar name, Mitsubishi Motors. It was spun off from shipbuilder Mitsubishi Heavy Industries and became No. 56. Without its auto subsidiary, the former parent dropped 23 places to No. 45.

A spate of mergers and acquisitions in Europe produced some fast-growing additions to the list. Ferruzzi, the Italian food processor, tripled revenues by acquiring French sugar refiner Béghin-Say. The company became No. 253 this year. Who knows where it will land in 1988? Controlled by the aggressive Raul Gardini and his family of Ravenna, Ferruzzi has picked up a 40% stake in Italian chemical giant Montedison (No. 48) and has begun a hostile takeover. In Sweden, Trelleborg, a small manufacturer of rubber and plastic products, bought its way onto the list as No. 290 by acquiring Boliden, which mines zinc, lead, and copper.

As a group, French companies quadrupled profits while the British doubled theirs. The comeback champ was Thorn EMI. The British electronics company restructured its semiconductor business and boosted profits 200-fold. A year earlier it had reported a 99% drop in earnings.

Profits at two European food processors rose as fast as yeast in a hot oven. Saint Louis, a French sugar refiner, had a 14-fold increase after merging with another French food company, Lesieur. Earnings were up seven times at Britain's Dalgety, whose products range from dog food to snacks for kids.

While the rising yen forced Japanese companies to cut costs and raise productivity, it also turned out to be a big boost for Japan's neighbors. Japanese companies rushed to build plants in Singapore, Taiwan, and other Southeast Asian countries whose currencies had appreciated less against the dollar. They also signed up local companies to make components for them. Tatung, a new Taiwanese entry on the 500 list (No. 497), makes electric fans for Japanese companies. Taking advantage of favorable exchange rates, Korean electronics manufacturers Lucky-Goldstar (No. 32) and Samsung (No. 20) are flooding the U.S. with TVs and microwave ovens.

One notable departure from the 500 is Gulf Canada, No. 175 last year. It split into three parts—an oil and gas production company, a pipeline and oil field services unit, and Abitibi Price, a forest products company acquired two years ago. Abitibi Price returns to the list as No. 304.

Global overproduction continued to hammer oil companies around the world. Kuwait Petroleum, No. 27 last year, plunged to No. 53. Sales of Asian oil and gas producers, including Japan's Idemitsu Kosan, Mitsubishi Oil, and Malaysia's Petroliam Nasional Berhad, also fell sharply.

The best performance of all companies on the list belongs to Noranda, a Canadian mining and forest products company. A rebound in prices plus Noranda's takeover of rival MacMillan Bloedel (No. 311 in 1986) resulted in a 115% increase in sales and a 730% rise in net income.

Reflecting the improved productivity of the world's industrials, 17 fewer companies lost money in 1987 than the year before, but there still were losers—48 of them. The biggest was Siderbrás, the Brazilian steelmaker. Its loss: $4.4 billion. Rampaging triple-digit inflation partly accounts for the big number. A merger between two troubled French steel companies, Usinor and Sacilor, produced the runner-up. Usinor-Sacilor (No. 44) lost $970 million. British Coal is still in the pits. Losing money remains an annual ritual for the government-owned company. It reported losses of $430 million, its ninth losing year in a row. Japan's comeback did not extend to all its smokestack industries. Steelmakers Nippon Kokan, Kobe Steel, Nippon Steel, and Kawasaki Steel, and shipbuilders Ishikawajima-Harima, Sumitomo, and Kawasaki Heavy Industries all lost money.

– Frederick Hiroshi Katayama and William Bellis

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE ✓
1	1	ROYAL DUTCH/SHELL GROUP	BRITAIN/NETH.	78,319.3	4,725.8	1	87,231.3	1	43,330.8	1	136,000	26	29
2	2	BRITISH PETROLEUM	BRITAIN	45,205.9	2,280.1	2	50,363.7	2	20,295.2	3	126,020	34	29
3	4	TOYOTA MOTOR[1]	JAPAN	41,455.0	1,699.6	5	33,180.1	7	20,743.1	2	84,207	53	40
4	3	IRI[2,3]	ITALY	41,270.0	146.5	161	N.A.		N.A.		422,000	2	33
5	5	DAIMLER-BENZ	W. GERMANY	37,535.5	970.2	13	29,626.9	11	5,983.6	26	326,288	5	40
6	8	VOLKSWAGEN[4]	W. GERMANY	30,392.7[7]	242.1	96	28,050.1	14	6,559.2	23	260,458	8	40
7	9	HITACHI[5]	JAPAN	30,332.2	617.3	32	36,573.5	5	12,534.1	7	161,325	17	36
8	15	FIAT	ITALY	29,642.8	1,830.2	3	40,730.2	4	9,837.9	11	270,578	7	40
9	13	SIEMENS[12]	W. GERMANY	27,462.9	649.6	29	29,783.0	10	8,428.5	16	359,000	3	36
10	6	MATSUSHITA ELECTRIC INDUSTRIAL[5]	JAPAN	27,325.7[7]	862.4[7]	17	28,613.1	13	15,188.7	5	134,764	27	36
11	7	UNILEVER	BRITAIN/NETHERLANDS	27,128.8	1,278.6	7	18,858.1	28	5,744.8	28	294,000	6	20
12	11	PHILIPS' GLOEILAMPENFABRIEKEN	NETH.	26,021.2	316.9	66	26,970.0	15	8,120.5	18	336,672	4	36
13	14	NISSAN MOTOR[5]	JAPAN	25,650.5	123.9	178	25,629.4	16	9,328.8	13	105,443	41	40
14	18	RENAULT[2]	FRANCE	24,539.7	613.7	33	19,057.2	25	(1,074.7)	496	188,936	11	40
15	10	ENI[2,4]	ITALY	24,242.5	483.6	42	43,716.4	3	8,534.5	15	119,152	38	29
16	12	NESTLÉ[4]	SWITZERLAND	23,625.9	1,224.8	10	19,774.1	21	9,550.1	12	163,030	16	20
17	17	BASF	W. GERMANY	22,383.7[4]	584.7	34	18,965.6	27	7,541.6	20	133,759	28	28
18	36	CGE (CIE GÉNÉRALE D'ÉLECTRICITÉ)	FRANCE	21,204.3	304.8	69	32,107.0	9	3,106.4	65	219,460	9	36
19	20	ELF AQUITAINE[2]	FRANCE	21,186.4	690.2	27	28,830.5	12	9,989.4	10	73,000	63	29
20	21	SAMSUNG	SOUTH KOREA	21,053.5	249.3	90	14,558.7	39	1,727.9	140	160,596	20	36
21	16	BAYER	W. GERMANY	20,662.2	833.3	18	20,469.2	20	8,629.4	14	164,400	14	28
22	19	HOECHST	W. GERMANY	20,558.1	766.6	22	18,418.0	29	5,537.3	29	167,781	13	28
23	24	TOSHIBA[5]	JAPAN	20,378.1	213.8	114	22,543.3	18	4,070.0	47	121,000	37	36
24	23	PEUGEOT[4]	FRANCE	19,658.2	1,116.1	12	14,462.7	40	3,852.9	52	160,600	19	40
25	25	IMPERIAL CHEMICAL INDUSTRIES	BRITAIN	18,232.8	1,245.8	8	16,572.3	32	6,497.3	25	127,800	32	28
26	34	HONDA MOTOR[6]	JAPAN	17,237.7	516.2	39	11,055.6	59	4,912.7	34	57,130	80	40
27	26	PETROBRÁS (PETRÓLEO BRASILEIRO)[2]	BRAZIL	15,640.5	171.5	143	15,460.3	36	7,640.1	19	67,909	68	29
28	42	NEC[5]	JAPAN	15,325.1	94.0	221	18,986.1	26	3,530.1	57	101,227	42	36
29	33	NIPPON STEEL[5]	JAPAN	14,639.8	(69.7)	473	24,707.1	17	4,510.7	40	69,269	66	33
30	35	VOLVO	SWEDEN	14,576.0	730.4	25	13,756.0	44	4,117.3	46	75,340	59	40
31	28	TOTAL	FRANCE	14,487.7	242.2	95	13,609.2	47	4,371.1	43	34,110	136	29
32	37	LUCKY-GOLDSTAR	SOUTH KOREA	14,422.3	180.7	132	10,268.5	65	1,935.0	120	88,403	48	36
33	29	THYSSEN[6]	W. GERMANY	14,177.3	151.3	157	8,752.2	79	1,876.4	128	121,533	36	33
34	45	ROBERT BOSCH	W. GERMANY	14,110.0[4]	440.9[4]	49	11,574.6[4]	56	3,373.9[4]	60	160,783	18	40
35	39	DAEWOO	SOUTH KOREA	13,437.9	36.8	336	19,680.8	22	1,801.3	134	94,888	43	36
36	40	PEMEX (PETRÓLEOS MEXICANOS)[2,3,9]	MEXICO	13,130.4	2.5	446	34,633.6	6	16,978.5	4	178,745	12	29
37	38	SAINT-GOBAIN	FRANCE	13,123.7	461.2	46	14,902.3	37	2,774.1	77	131,000	30	32
38	48	MITSUBISHI ELECTRIC[5]	JAPAN	12,980.5	66.3	268	13,342.8	48	3,476.8	58	73,536	62	36
39	•	INI[2]	SPAIN	12,734.5	(344.9)	492	32,329.6	8	8,341.9	17	163,821	15	33
40	31	GENERAL MOTORS OF CANADA[10]	CANADA	12,732.4	3.8	445	4,550.5	166	1,874.5	129	44,749	103	40
41	32	BAT INDUSTRIES	BRITAIN	12,330.1	1,231.0	9	16,063.1	34	7,442.2	21	154,164	22	21
42	47	RUHRKOHLE	W. GERMANY	11,274.1	10.5	434	11,841.1	54	925.3	232	127,213	33	10
43	58	FUJITSU[5]	JAPAN	11,194.2	132.3	171	13,716.3	45	4,670.5	37	89,293	47	44
44	118	USINOR-SACILOR[2,4,50]	FRANCE	11,165.0	(969.5)	496	13,657.8	46	(135.3)	493	90,082	46	33
45	22	MITSUBISHI HEAVY INDUSTRIES[5]	JAPAN	11,157.3	170.2	145	19,370.5	23	3,659.4	55	58,200	78	45
46	46	MAZDA MOTOR[12]	JAPAN	11,057.5	29.1	367	7,888.4	89	2,250.9	98	28,285	175	40
47	30	NIPPON OIL[5]	JAPAN	11,041.0	68.1	260	9,552.8	70	2,628.8	82	11,140	352	29
48	52	MONTEDISON	ITALY	10,636.2	315.4	67	19,168.1	24	2,971.6	70	66,785	70	28
49	60	ELECTROLUX	SWEDEN	10,623.2	288.8	75	8,484.7	82	1,956.9	116	140,500	24	36
50	51	CIBA-GEIGY	SWITZERLAND	10,568.3	737.4	24	17,426.6	31	11,158.5	8	86,109	50	28

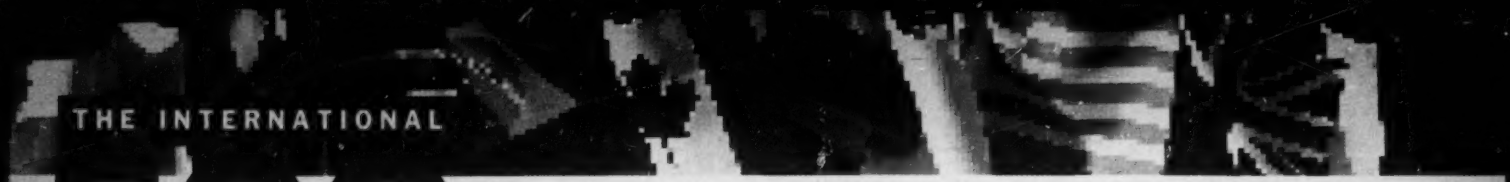
The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.

THE INTERNATIONAL 500

51-100

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE
51	43	FORD MOTOR OF CANADA[10]	CANADA	10,539.8	63.0	277	2,786.0	270	880.3	249	27,200	183	40
52	67	BMW (BAYERISCHE MOTOREN)	W. GER.	10,181.9	209.3	116	6,572.6	119	2,094.9	106	55,769	81	40
53	27	KUWAIT PETROLEUM[1,2]	KUWAIT	10,107.0	246.5	92	20,840.0	19	14,499.1	6	15,552	291	29
54	50	THOMSON[7]	FRANCE	9,977.6	176.8	135	15,560.1	35	1,427.6	159	86,000	51	36
55	71	ADAM OPEL	W. GERMANY	9,561.1[10]	266.7	83	3,846.5	198	972.6	221	55,282	82	40
56	•	MITSUBISHI MOTORS[5]	JAPAN	9,523.3[9]	90.2[9]	228	7,620.0[9]	92	979.4[9]	220	25,409	194	40
57	57	FORD-WERKE	W. GERMANY	9,466.3[10]	450.5	48	4,805.1	157	1,228.3	180	47,104	96	40
58	59	RHÔNE-POULENC[7]	FRANCE	9,342.6	366.8	59	11,274.2	58	3,173.6	64	82,500	54	28
59	54	MANNESMANN	W. GERMANY	9,265.1	119.2	184	8,565.4	80	2,286.8	96	122,298	35	45
60	41	CANADIAN PACIFIC	CANADA	9,206.5	623.1	31	13,844.6	43	4,969.6	33	85,400	52	33
61	79	SHOWA SHELL SEKIYU	JAPAN	8,989.7	49.9	303	6,796.3	111	461.2	370	2,578	485	29
62	94	HANSON TRUST[4]	BRITAIN	8,890.4	891.1	15	10,358.1	64	3,053.0	67	88,000	49	20
63	53	INDIAN OIL[2,5]	INDIA	8,629.0	335.6	63	3,179.9	237	1,043.0	209	32,604	144	29
64	55	PETROFINA	BELGIUM	8,583.2	471.9	44	9,706.4	66	3,265.5	62	22,100	222	29
65	76	FORD MOTOR[10]	BRITAIN	8,541.9	355.7	60	8,281.4	86	2,055.7	109	47,000	97	40
66	74	STATOIL[2]	NORWAY	8,337.5	(227.5)	489	9,042.1	76	473.3	366	10,627	362	29
67	49	PETRÓLEOS DE VENEZUELA[2]	VENEZUELA	8,290.5	1,511.7	6	12,336.7	51	10,096.1	9	44,203	105	29
68	75	ASEA	SWEDEN	8,235.0	193.9	122	11,396.2	57	1,835.4	132	72,868	64	45
69	63	NORSK HYDRO[2]	NORWAY	8,083.5	271.4	81	10,755.5	62	1,856.6	130	39,139	123	28
70	70	SANYO ELECTRIC[14]	JAPAN	7,983.7	(118.9)	482	11,735.4	55	4,718.1	36	40,590	118	36
71	61	SONY[5]	JAPAN	7,956.4[7]	156.5[7]	155	9,687.2	67	4,179.3	45	47,583	94	36
72	64	FRIED. KRUPP	W. GERMANY	7,846.4	13.4	426	6,631.4	117	1,027.7	212	56,205	81	33
73	65	GEC (GENERAL ELECTRIC CO.)[3]	BRITAIN	7,830.0	649.1	30	8,876.6	78	4,651.6	38	157,000	21	36
74	73	MICHELIN	FRANCE	7,808.2	405.1	55	10,497.5	63	2,231.2	100	117,000	39	30
75	72	GRAND METROPOLITAN[4]	BRITAIN	7,741.5	718.9	26	7,436.7	97	2,822.4	75	129,436	31	49
76	77	AKZO GROUP	NETHERLANDS	7,668.4	465.0	45	6,686.0	116	2,157.1	103	67,400	69	28
77	69	DALGETY[4]	BRITAIN	7,631.0	117.6	188	1,945.0	354	546.7	331	23,966	207	20
78	83	BARLOW RAND[4]	SOUTH AFRICA	7,617.9	222.1	108	5,240.9	148	1,094.3	201	140,445	25	20
79	44	IDEMITSU KOSAN[9]	JAPAN	7,596.3[9]	5.2[9]	442	8,544.2[9]	81	280.1[9]	435	5,792[9]	434	29
80	111	MAN[1]	W. GERMANY	7,438.2	68.2	258	6,611.7	118	1,175.9	188	52,229	85	45
81	100	IBM JAPAN	JAPAN	7,333.4[10]	513.6	40	5,357.7	144	2,389.9	89	20,210	234	44
82	81	NIPPON KOKAN[5,16]	JAPAN	7,325.2	(129.4)	483	17,719.1	30	1,609.5	147	35,146	130	33
83	78	ISUZU MOTORS[12]	JAPAN	7,179.9	46.7	311	6,125.6	129	903.9	239	24,609	203	40
84	•	REPSOL[2,4]	SPAIN	7,146.2	383.5	57	7,000.8	105	2,871.4	72	18,910	246	29
85	137	METALLGESELLSCHAFT[6]	W. GERMANY	7,117.5	42.0	317	3,861.3	197	734.7	278	24,813	201	33
86	86	NIPPONDENSO	JAPAN	7,102.2	215.9	113	7,382.9	98	3,825.5	54	45,572	100	40
87	93	SHARP[5]	JAPAN	6,994.4	128.8	174	9,612.5	68	2,677.8	79	29,346	164	36
88	56	BROWN BOVERI	SWITZERLAND	6,951.5	112.6	192	11,927.6	53	3,418.8	59	93,900	44	36
89	85	BTR	BRITAIN	6,801.4	785.0	20	6,163.1	127	2,431.8	87	81,800	55	45
90	82	SUNKYONG	SOUTH KOREA	6,781.6	91.0	227	3,521.1	212	784.6	266	17,985	258	29
91	98	CANON	JAPAN	6,753.1	91.6	225	9,351.6	71	3,061.4	66	37,521	126	44
92	62	BRITISH COAL[2,3]	BRITAIN	6,737.2	(429.8)	495	10,819.9	60	(57.9)	492	141,529	23	10
93	88	VEBA OEL	W. GERMANY	6,716.1[4]	(11.1)	455	2,937.4	255	640.3	307	17,028	266	29
94	128	BRITISH AEROSPACE	BRITAIN	6,679.7	(180.3)	487	8,019.3	88	1,921.8	122	93,038	45	41
95	108	JAPAN TOBACCO[2]	JAPAN	6,674.6[9]	303.3[9]	71	12,312.4[9]	52	6,502.9[9]	24	29,600[9]	162	21
96	90	KOBE STEEL[5]	JAPAN	6,645.8	(74.6)	474	14,068.5	42	1,218.7	182	30,033	157	33
97	87	ALCAN ALUMINIUM	CANADA	6,546.0	433.0	50	7,660.0	91	3,970.0	49	63,000	73	33
98	112	SAAB-SCANIA	SWEDEN	6,523.0	227.8	103	6,374.4	123	1,155.1	191	50,373	89	40
99	106	PECHINEY[7]	FRANCE	6,479.1	121.3	181	6,972.9	106	1,392.9	162	46,200	98	33
100	91	IBM DEUTSCHLAND	W. GERMANY	6,425.5[10]	303.4	70	5,672.2	139	2,240.9	99	30,544	155	44

The definitions and concepts underlying the figures in this directory are explained on page D33. √ Industry code definitions appear on page D33. Footnotes appear on page D33.

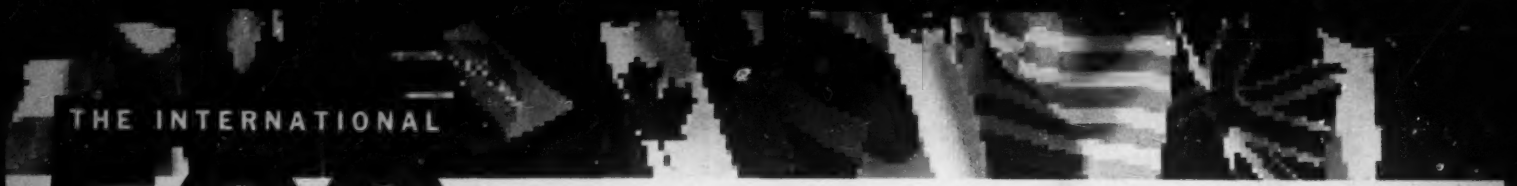


THE INTERNATIONAL 500

101-150

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE ✓
101	109	NESTE[2]	FINLAND	6,392.8	244.4	93	5,695.6	138	2,387.5	90	10,980	356	29
102	101	ESSO UK[10]	BRITAIN	6,318.6	864.5	16	8,191.3	87	1,675.1	143	4,840	454	29
103	124	DEGUSSA[4]	W. GERMANY	6,257.9	64.3	275	3,278.7	231	692.4	293	30,789	153	33
104	89	KAWASAKI STEEL[5]	JAPAN	6,252.0	(42.7)	464	12,712.4	49	2,299.8	94	30,817	152	33
105	97	IBM FRANCE[4,10]	FRANCE	6,241.1	373.1	58	4,777.6	159	1,937.5	119	21,716	225	44
106	95	MITSUBISHI CHEMICAL INDUSTRIES[17,18]	JAPAN	6,189.1	92.3	224	7,441.3	96	1,080.0	203	19,010	243	28
107	119	BSN[4]	FRANCE	6,181.2	257.9	87	6,446.9	122	2,599.5	83	41,285	115	20
108	•	ELDERS IXL[1]	AUSTRALIA	6,169.3	231.9	101	6,966.6	108	2,208.2	101	25,845	193	49
109	121	TAIYO FISHERY[17]	JAPAN	6,161.7	.8	448	2,868.2	263	213.3	458	8,251	390	20
110	126	SANDOZ	SWITZERLAND	6,019.6	420.3	52	7,505.3	95	4,400.3	41	43,996	108	42
111	120	SOLVAY	BELGIUM	6,013.7	289.8	74	6,036.8	131	1,894.8	125	44,957	101	28
112	92	SUMITOMO METAL INDUSTRIES[5]	JAPAN	5,991.9	(88.8)	479	14,886.6	38	2,190.0	102	30,933	150	33
113	110	ASAHI GLASS	JAPAN	5,963.7	239.7	99	7,689.1	90	3,245.2	63	16,570	281	28
114	104	CHINESE PETROLEUM[2]	TAIWAN	5,861.7[9]	1,772.8[9]	4	7,318.9[9]	100	5,344.0[9]	30	20,647[9]	233	29
115	84	BROKEN HILL PROPRIETARY[19]	AUSTRALIA	5,790.9	569.3	35	12,477.5	50	5,281.6	31	61,000	75	10
116	136	ISHIKAWAJIMA-HARIMA HEAVY IND.[5]	JAPAN	5,737.8	(145.8)	484	9,220.8	74	803.7	259	28,828	172	45
117	176	TÜRKIYE PETROLLERI[2]	TURKEY	5,720.0	486.9	41	3,910.5	194	1,379.7	164	18,846	247	29
118	130	IBM UNITED KINGDOM HOLDINGS[10]	BRITAIN	5,709.3	516.3	38	3,487.2	216	1,640.8	145	18,026	256	44
119	114	OLIVETTI	ITALY	5,688.3	310.0	68	9,271.6	73	2,828.8	74	58,087	79	44
120	123	BRIDGESTONE	JAPAN	5,672.5	247.7	91	7,063.7	103	2,848.3	73	34,061	137	30
121	127	ASAHI CHEMICAL INDUSTRY[5]	JAPAN	5,658.6	129.7	173	6,126.7	128	1,664.9	144	22,126	220	22
122	122	PIRELLI	ITALY/SWITZERLAND	5,615.0	175.0	138	6,045.0	130	2,095.0	105	66,323	71	30
123	134	SUMITOMO CHEMICAL	JAPAN	5,576.0	113.8	191	7,507.5	94	1,263.5	175	12,310	334	28
124	115	RTZ[4]	BRITAIN	5,568.5	458.8	47	7,593.6	93	3,027.6	68	51,038	88	10
125	215	NORANDA	CANADA	5,470.4	259.0	86	7,380.2	99	2,815.4	76	44,000	107	33
126	96	CHRYSLER CANADA[10]	CANADA	5,464.8	74.8	245	2,268.4	318	638.7	309	15,677	290	40
127	132	FELDMÜHLE NOBEL	W. GERMANY	5,452.8	80.0	236	4,274.0	176	1,176.3	187	42,924	110	26
128	146	DAI NIPPON PRINTING[19]	JAPAN	5,410.9	181.2	131	4,586.3	165	2,424.7	88	13,854	308	27
129	145	SNOW BRAND MILK PRODUCTS[5]	JAPAN	5,389.5	24.0	386	2,470.4	298	432.8	377	14,734	297	20
130	99	ESSO (GERMANY)	W. GERMANY	5,362.8[10]	34.8	347	2,568.3	293	916.8	235	2,864	482	29
131	154	SUZUKI MOTOR[5]	JAPAN	5,340.0	59.6	284	3,393.1	221	745.2	274	12,857	323	40
132	105	IMPERIAL OIL[10]	CANADA	5,308.8	561.8	36	7,289.6	101	4,280.9	44	11,627	344	29
133	139	FUJI PHOTO FILM[13]	JAPAN	5,292.3	480.6	43	7,269.2	102	4,382.7	42	17,703	259	38
134	116	AÉROSPATIALE[2,4]	FRANCE	5,217.2	22.6	391	9,567.5	69	897.0	243	41,216	116	41
135	135	ROCHE/SAPAC	SWITZERLAND	5,165.4	323.1	64	10,792.1	61	6,845.1	22	47,498	95	42
136	102	BRITISH STEEL[2,5]	BRITAIN	5,164.5	265.6	84	6,879.6	110	4,875.6	35	52,000	86	33
137	143	HENKEL	W. GERMANY	5,148.9	151.4	156	4,315.5	174	1,605.1	148	34,731	133	28
138	125	KOMATSU	JAPAN	5,120.6	65.7	269	8,474.0	83	3,287.5	61	22,871	215	45
139	131	L.M. ERICSSON TELEPHONE	SWEDEN	5,104.4	115.8	190	5,743.2	136	1,288.7	172	70,893	65	36
140	107	ROVER GROUP[2]	BRITAIN	5,075.6	(43.9)	466	3,291.1	230	629.4	313	44,790	102	40
141	222	HILLSDOWN HOLDINGS	BRITAIN	4,980.9	144.6	164	3,026.7	249	722.9	283	44,102	106	20
142	150	KAWASAKI HEAVY INDUSTRIES[5]	JAPAN	4,892.3	(87.1)	478	6,765.4	112	496.7	361	23,107	214	37
143	159	TOPPAN PRINTING[19]	JAPAN	4,888.2	119.5	182	3,963.4	187	1,767.3	138	14,520	300	27
144	•	CEA-INDUSTRIE[2,4]	FRANCE	4,879.6	299.2	72	16,478.2	33	2,041.0	111	30,700	154	28
145	149	SCHNEIDER	FRANCE	4,873.3	53.9	293	9,331.7	72	516.8	346	60,072	77	45
146	133	NORTHERN TELECOM	CANADA	4,853.5	347.2	62	4,869.0	156	2,560.5	85	48,778	91	36
147	138	YPF (YACIMIENTOS PETRÓLIFEROS)[2,3]	ARGEN	4,774.7	127.3	175	8,372.3	84	N.A.		34,870	132	29
148	129	THORN EMI[5]	BRITAIN	4,752.6	111.8	195	3,166.1	238	1,012.6	215	74,321	61	36
149	155	KOC HOLDING	TURKEY	4,738.0	166.9	147	1,630.7	392	263.2	442	35,530	129	40
150	172	BERTELSMANN[1]	W. GERMANY	4,735.8	32.1	355	3,562.0	211	540.4	336	42,000	113	27

The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.

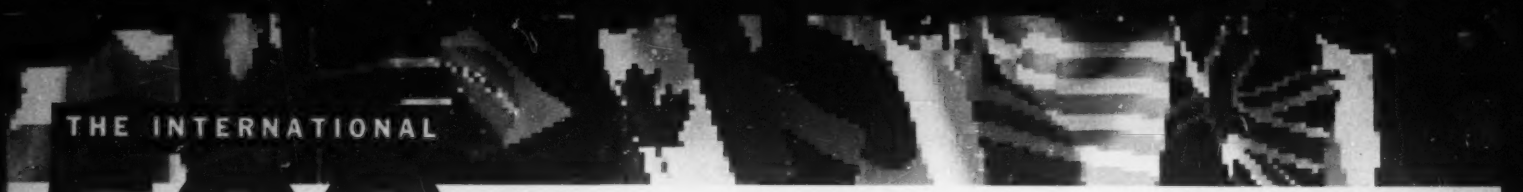


500

151-200

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE ✓
151	205	VIAG	W. GERMANY	4,697.5[4]	98.1	213	5,940.7	134	1,368.4	165	32,733	143	33
152	157	MATSUSHITA ELECTRIC WORKS[14]	JAPAN	4,593.4	124.4	177	4,359.5	173	1,955.5	117	17,243	264	45
153	152	SSANGYONG	SOUTH KOREA	4,582.7	74.5	246	4,741.7	162	862.0	251	16,870	273	29
154	167	SUMITOMO ELECTRIC INDUSTRIES[5]	JAPAN	4,577.2	103.1	206	4,648.9	164	1,470.7	154	24,498	204	34
155	153	ALLIED-LYONS[24]	BRITAIN	4,549.9	286.4	77	6,741.7	113	2,637.9	81	77,549	58	49
156	158	TORAY INDUSTRIES[5]	JAPAN	4,445.8	97.1	216	5,615.5	140	1,699.2	142	26,732	185	28
157	160	FUJI HEAVY INDUSTRIES[5]	JAPAN	4,444.5	99.4	212	3,790.6	203	1,202.9	184	15,711	289	40
158	66	DSM[2,4]	NETHERLANDS	4,431.6	218.1	111	4,542.3	167	1,782.1	135	27,920	179	28
159	142	TOA NENRYO KOGYO	JAPAN	4,409.3	264.2	85	4,982.9	153	2,687.7	78	2,322	487	29
160	103	SCHLUMBERGER	NETHERLANDS ANTILLES	4,402.0	352.6	61	6,741.0	114	3,835.9	53	50,000	90	38
161	147	SALZGITTER[6,15]	W. GERMANY	4,188.8	37.5	332	4,404.7	171	799.8	264	37,542	125	33
162	117	NIPPON MINING[5]	JAPAN	4,147.0	18.5	410	4,746.6	161	630.2	312	7,221	405	29
163	209	MITSUBISHI METAL[5]	JAPAN	4,120.3	(3.4)	450	4,507.2	168	342.4	414	11,541	345	33
164	174	KUBOTA[21]	JAPAN	4,109.8	79.2	239	4,977.1	154	1,951.8	118	18,000	257	45
165	185	JACOBS SUCHARD	SWITZERLAND	4,092.0	177.9	133	2,431.8	300	898.9	241	16,503	282	20
166	163	HOESCH	W. GERMANY	4,082.2	27.3	372	4,075.3	182	1,037.1	210	32,800	142	33
167	168	BICC	BRITAIN	4,080.0	104.9	200	2,397.1	304	560.1	326	44,400	104	45
168	156	BEECHAM GROUP[5]	BRITAIN	4,073.8	297.5	73	3,915.0	193	2,032.9	112	40,900	117	42
169	171	BASS[4]	BRITAIN	4,026.9	407.7	54	5,968.7	133	3,954.1	51	79,348	57	49
170	151	COCKERILL SAMBRE[2,4]	BELGIUM	3,959.2	(50.3)	467	4,434.7	169	845.2	254	26,672	187	33
171	161	OIL & NATURAL GAS COMMISSION[2,5]	INDIA	3,939.3[9]	1,162.0[9]	11	8,916.3[9]	77	4,569.4[9]	39	43,349[9]	109	29
172	189	DAIHATSU MOTOR[1]	JAPAN	3,930.5	26.7	374	2,708.1	275	609.2	317	18,846	248	40
173	179	L'AIR LIQUIDE	FRANCE	3,902.9	231.4	102	5,204.1	149	1,920.5	123	26,000	192	28
174	184	SHOWA DENKO	JAPAN	3,778.7	(14.5)	456	5,587.4	141	312.4	427	8,898	377	28
175	164	PETRO-CANADA[2]	CANADA	3,756.9	160.6	152	6,501.3	120	3,617.1	56	7,204	407	29
176	•	SIDERBRÁS[7]	BRAZIL	3,742.2	(4,362.1)	497	14,113.1	41	(386.8)	495	79,544	56	33
177	198	RICOH[5]	JAPAN	3,702.7	68.5	256	3,862.4	196	1,462.5	156	28,000	178	44
178	166	HACIÖMER SABANCI HOLDING	TURKEY	3,681.4	225.2	105	3,957.8	188	394.1	395	29,094	167	22
179	214	TOYO SEIKAN[5]	JAPAN	3,576.3	111.8	194	2,878.8	262	1,243.5	177	6,050	430	34
180	223	TAKEDA CHEMICAL[5]	JAPAN	3,573.3	176.8	136	5,244.9	147	2,573.2	84	13,599	313	42
181	182	KOREA EXPLOSIVES	SOUTH KOREA	3,563.8	33.9	350	3,505.9	214	1,011.3	216	18,291	252	28
182	186	FURUKAWA ELECTRIC[5]	JAPAN	3,548.3	73.0	248	3,957.3	189	725.6	282	14,078	306	33
183	219	TARMAC	BRITAIN	3,545.8	271.8	79	3,244.7	234	1,340.0	169	28,031	177	32
184	226	KIRIN BREWERY[17]	JAPAN	3,541.0	205.1	119	4,786.2	158	1,977.9	115	10,450	363	49
185	221	INTERNATIONAL THOMSON ORG.	CANADA	3,537.0	209.0	117	3,419.0	220	1,188.0	186	23,200	212	27
186	216	POHANG IRON & STEEL	SOUTH KOREA	3,533.2[9]	85.1[9]	230	6,457.1[9]	121	2,062.2[9]	107	19,329[9]	242	33
187	199	NEWS CORPORATION[1]	AUSTRALIA	3,527.6	548.2	37	9,116.6	75	4,029.0	48	26,700	186	27
188	•	CRA	AUSTRALIA	3,522.7	226.0	104	5,859.4	135	2,282.2	97	25,011	197	10
189	224	KANEBO[20]	JAPAN	3,510.5	(43.1)	465	4,181.4	181	99.6	481	27,051	184	22
190	192	RANK XEROX[2,4,12]	BRITAIN	3,499.7	185.7	127	3,813.6	200	1,847.2	131	29,969	158	44
191	261	HYUNDAI MOTOR	SOUTH KOREA	3,437.4	72.3	249	2,335.2	313	390.4	397	29,000	169	40
192	180	GUINNESS[4]	BRITAIN	3,422.6	804.8	19	5,478.8	141	1,929.4	121	20,664	232	49
193	169	ALUSUISSE (SWISS ALUMINIUM)	SWITZERLAND	3,399.6	173.0	141	4,213.1	178	886.4	246	23,595	210	33
194	190	STC	BRITAIN	3,387.6	221.6	109	2,555.9	294	1,213.8	183	34,904	131	36
195	177	COURTAULDS[5]	BRITAIN	3,375.2	199.8	121	2,482.2	297	1,060.0	205	65,400	72	22
196	204	ROLLS-ROYCE	BRITAIN	3,375.1	219.7	110	2,912.0	258	1,612.5	146	42,000	114	41
197	236	FUJI ELECTRIC[5]	JAPAN	3,375.1	27.4	370	3,945.9	191	624.6	314	18,275	253	36
198	181	CDF CHIMIE[7]	FRANCE	3,372.3	167.0	146	2,853.6	264	477.7	364	16,641	277	28
199	207	L'ORÉAL	FRANCE	3,342.9	175.8	137	3,164.7	239	1,350.7	168	27,600	181	43
200	196	CADBURY SCHWEPPES	BRITAIN	3,329.2	181.5	130	2,638.5	282	899.1	240	28,130	177	20

The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.

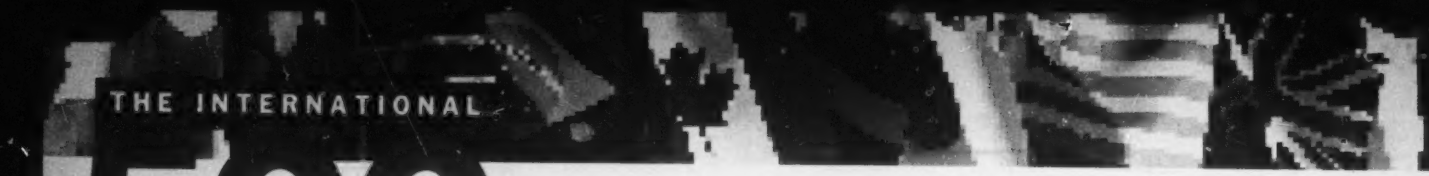


THE INTERNATIONAL 500

201-250

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE
201	202	TEIJIN[2]	JAPAN	3,305.1	97.4	215	4,292.6	175	1,221.7	181	11,254	350	28
202	•	MCDERMOTT INTERNATIONAL[5]	PANAMA	3,289.3	(102.4)	481	4,383.3	172	1,035.3	211	29,000	170	45
203	•	ASSOCIATED BRITISH FOODS[5]	BRITAIN	3,285.7	673.6	28	3,135.4	241	2,375.3	91	54,114	84	20
204	227	OJI PAPER[5]	JAPAN	3,272.1	76.0	243	3,624.6	206	1,044.4	208	5,536	445	26
205	235	NIPPON SUISAN[5]	JAPAN	3,261.6	14.7	423	2,019.5	347	473.9	365	6,154	428	20
206	195	HYOSUNG	SOUTH KOREA	3,257.8	58.8	288	2,276.2	317	678.3	297	24,000	205	22
207	306	STORA KOPPARBERGS BERGSLAGS	SWEDEN	3,226.5	59.6	285	5,741.3	137	1,144.6	193	21,530	226	26
208	•	PETRONAS[2,5]	MALAYSIA	3,214.5	910.0	14	8,307.5	85	5,791.5	27	7,054	412	29
209	239	NOKIA	FINLAND	3,178.6	191.4	124	3,942.0	192	1,438.1	158	29,300	165	36
210	140	MITSUBISHI OIL[5]	JAPAN	3,178.2	52.2	298	3,576.6	210	171.1	469	3,011	481	29
211	229	LAFARGE COPPÉE	FRANCE	3,174.1	254.7	88	3,993.1	184	1,385.1	163	20,104	235	32
212	201	UBE INDUSTRIES[5]	JAPAN	3,153.1	(33.0)	461	5,333.4	145	188.5	463	14,676	298	28
213	308	PILKINGTON BROTHERS[5]	BRITAIN	3,138.7	185.0	128	3,601.0	208	1,368.0	166	54,600	83	32
214	173	GKN	BRITAIN	3,115.5	101.5	208	2,851.6	265	1,155.6	190	38,300	124	40
215	217	SULZER BROTHERS	SWITZERLAND	3,108.0	50.7	302	5,361.4	143	2,350.0	92	31,662	148	45
216	194	SAARBERGWERKE[2]	W. GERMANY	3,095.7	(164.4)	486	2,982.6	252	167.4	470	28,761	173	29
217	210	DE BEERS CONSOLIDATED MINES	S. AFRICA	3,091.9	742.1	23	6,016.1	132	5,012.7	32	22,143	218	10
218	193	SKF	SWEDEN	3,088.5	45.4	313	4,023.3	183	1,574.6	151	45,685	99	34
219	188	BOC GROUP[4]	BRITAIN	3,051.9	252.1	89	3,694.8	204	1,581.4	150	37,488	127	28
220	269	AISIN SEIKI[5]	JAPAN	3,049.3	67.2	265	2,168.5	328	884.9	248	11,982	339	40
221	218	CEPSA	SPAIN	3,023.6	65.2	271	1,702.5	384	722.0	285	3,591	474	29
222	243	AJINOMOTO[5]	JAPAN	3,010.5	88.7	229	3,897.4	195	1,910.5	124	10,225	365	20
223	213	BULL[2]	FRANCE	3,006.3	37.5	333	3,331.7	225	908.0	237	26,337	189	44
224	191	UNITED BISCUITS (HOLDINGS)[4]	BRITAIN	3,003.7	148.3	158	1,984.6	351	923.2	233	39,294	122	20
225	187	HYUNDAI HEAVY INDUSTRIES	SOUTH KOREA	2,964.5[4]	19.3	407	3,291.3	229	827.5	257	48,200	92	37
226	237	YAMAHA MOTOR[5]	JAPAN	2,962.4[3]	63.3[3]	276	2,658.5	281	249.2	446	10,140	364	40
227	309	NIPPON MEAT PACKERS[5]	JAPAN	2,944.9	59.3	286	1,691.4	386	673.2	299	12,500	327	20
228	220	COATS VIYELLA[4]	BRITAIN	2,942.0	271.6	80	2,705.8	277	1,296.6	171	68,207	67	22
229	203	UNIGATE[5]	BRITAIN	2,940.4	104.6	201	1,273.7	432	443.4	374	33,688	138	20
230	234	RMC GROUP	BRITAIN	2,932.0	131.6	172	2,185.9	326	744.4	275	20,980	229	32
231	200	REED INTERNATIONAL[5]	BRITAIN	2,910.4	190.1	126	2,354.3	308	1,115.9	198	34,600	134	27
232	289	KAO[5]	JAPAN	2,903.0	79.9	237	2,615.4	284	1,236.9	178	7,000	414	43
233	211	MOBIL OIL (GERMANY)	W. GERMANY	2,899.3[10]	170.8	144	1,304.1	429	402.7	390	2,159	489	29
234	259	FLETCHER CHALLENGE[1]	NEW ZEALAND	2,893.7	190.3	125	4,921.9	155	1,448.2	157	40,000	119	26
235	225	HOOGOVENS GROEP	NETHERLANDS	2,886.5	(37.7)	462	4,746.7	160	875.6	250	29,609	161	33
236	252	TOYOBO[5]	JAPAN	2,882.9[3]	37.8[3]	329	2,795.7	269	536.6	338	14,975	294	28
237	228	NISSAN SHATAI[5]	JAPAN	2,874.8[7]	9.6[7]	438	985.2[7]	463	388.8[7]	399	6,581[7]	421	40
238	268	HACHETTE[4]	FRANCE	2,862.8	56.1	292	2,044.6	343	364.2	407	17,685	260	27
239	253	GALLAHER	BRITAIN	2,862.5	166.3	148	2,570.2	292	1,085.2	202	32,540	145	21
240	277	MATRA[4]	FRANCE	2,859.5	38.2	326	3,815.8	199	273.1	438	1,445	496	41
241	240	HAWKER SIDDELEY GROUP	BRITAIN	2,857.1	139.3	168	2,833.9	266	1,360.4	167	42,700	111	45
242	249	CONTINENTAL[22]	W. GERMANY	2,835.7	77.0	242	3,057.8	247	898.6	242	42,263	112	30
243	278	NIXDORF COMPUTER	W. GERMANY	2,820.7[14]	143.3	166	3,062.2	246	1,885.3	127	29,440	163	44
244	247	ESSO (FRANCE)[10]	FRANCE	2,818.8	34.1	349	1,529.3	400	542.5	333	3,874	470	29
245	265	DAINIPPON INK AND CHEMICALS[5]	JAPAN	2,808.5	40.0	323	3,492.1	215	657.0	304	13,781	311	28
246	292	SEKISUI CHEMICAL[5]	JAPAN	2,802.5	47.3	306	2,596.1	286	744.1	276	8,639	378	28
247	248	JOHN LABATT[20]	CANADA	2,765.9	91.6	226	1,761.3	373	576.5	324	16,200	285	20
248	208	ÖMV[2]	AUSTRIA	2,745.9	25.3	380	3,097.3	244	1,017.4	214	6,440	423	29
249	246	HEINEKEN	NETHERLANDS	2,742.7	141.5	167	3,424.2	219	1,394.7	161	28,418	174	49
250	183	STEEL AUTHORITY OF INDIA[2,5]	INDIA	2,738.4[9]	41.3[9]	319	6,969.1[9]	107	3,015.0[9]	69	205,623[9]	10	33

The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.

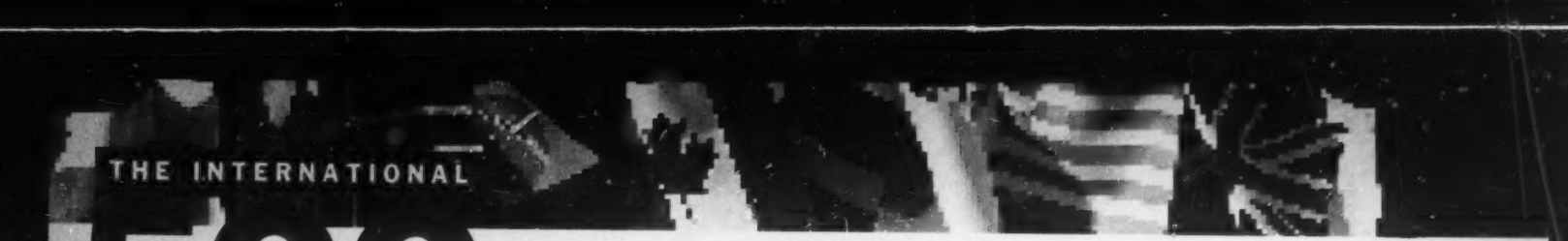


THE INTERNATIONAL 500

251-300

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE ✓
251	258	VAUXHALL MOTORS[9,10]	BRITAIN	2,734.2	50.8	301	1,484.1	409	(246.7)	494	11,492	347	40
252	244	DEUTSCHE TEXACO	W. GERMANY	2,731.4[10]	51.6	300	1,821.0	367	522.7	343	4,243	466	29
253	•	FERRUZZI AGRICOLA[8]	ITALY	2,720.4	37.5	331	5,088.5	152	1,103.4	200	16,959	272	27
254	144	ESSO ITALIANA[10]	ITALY	2,686.4	(53.3)	468	1403.6	438	117.2	479	2,343	486	29
255	288	KONICA[23,24]	JAPAN	2,683.3	(7.1)	453	3,159.8	240	1,055.4	207	20,000	236	38
256	251	TDK[14]	JAPAN	2,672.6	122.5	179	3,514.7	213	2,000.6	113	17,567	261	36
257	285	JUJO PAPER[5]	JAPAN	2,670.7	65.1	272	3,217.1	235	530.0	339	7,215	406	26
258	281	GLAXO HOLDINGS[14]	BRITAIN	2,655.5	777.9	21	3,803.0	202	2,338.6	93	24,954	198	42
259	233	TATE & LYLE[6]	BRITAIN	2,649.2	108.9	199	1,419.3	416	554.7	328	13,029	321	20
260	212	GENERAL SEKIYU[5]	JAPAN	2,644.5	15.9	421	2,128.1	335	542.9	332	1,760	492	29
261	310	NIPPON GAKKI[5,25]	JAPAN	2,636.9	66.7	267	2,322.1	314	907.2	238	17,185	265	47
262	256	MITSUI TOATSU CHEMICALS[5]	JAPAN	2,616.8	31.5	358	3,463.0	217	194.8	461	10,850	359	28
263	262	SCHERING	W. GERMANY	2,615.3	79.8	238	3,247.2	233	1,233.2	179	23,968	206	28
264	255	DEUTSCHE BABCOCK[6]	W. GERMANY	2,577.7	23.8	387	2,041.3	344	402.4	391	22,130	219	34
265	242	KOOR INDUSTRIES	ISRAEL	2,571.1	(252.0)	490	3,314.7	227	455.0	371	30,300	156	36
266	•	NIPPON LIGHT METAL[5]	JAPAN	2,568.2	(41.4)	463	2,802.0	267	92.3	482	10,038	369	34
267	444	KF INDUSTRI	SWEDEN	2,567.5	22.5	393	1,725.2	378	317.9	424	13,628	312	20
268	241	LUCAS INDUSTRIES[17]	BRITAIN	2,562.3	58.6	290	2,138.3	332	764.8	269	62,572	74	40
269	264	PROCORDIA[2]	SWEDEN	2,550.9	182.9	129	2,672.5	279	894.2	244	28,936	171	21
270	317	OKI ELECTRIC INDUSTRY[5]	JAPAN	2,548.7	13.4	427	3,371.9	223	708.2	289	19,375	240	36
271	257	YAMAZAKI BAKING	JAPAN	2,546.5	67.9	261	1,913.1	357	998.0	217	13,581	314	20
272	238	OERLIKON-BÜHRLE	SWITZERLAND	2,533.5	(77.6)	475	6,346.4	124	2,545.4	86	29,915	159	34
273	254	SNECMA[2]	FRANCE	2,515.9	(94.3)	480	4,661.2	163	338.6	418	25,287	195	41
274	282	HÜLS	W. GERMANY	2,511.6[9]	66.8[9]	266	2,407.5[9]	303	885.6[9]	247	15,516[9]	292	28
275	270	SHISEIDO[14]	JAPAN	2,506.8	60.4	281	3,130.9	242	1,769.5	137	13,802	310	43
276	359	SWEDISH MATCH	SWEDEN	2,502.3	61.0	280	2,076.4	340	417.6	386	34,200	135	32
277	245	AVIONS MARCEL DASSAULT	FRANCE	2,500.4	25.8	377	7,063.4	104	499.6	358	17,306	263	41
278	346	HONSHU PAPER[5]	JAPAN	2,494.0	12.8	428	3,991.1	185	217.3	455	7,437	402	26
279	305	HOLDERBANK FINANCIÈRE GLARIS[4]	SWITZL	2,471.9	118.9	186	6,167.5	126	2,123.0	104	22,395	216	32
280	263	SVENSKA CELLULOSA	SWEDEN	2,470.1	201.2	120	3,388.6	222	1,272.6	174	17,020	267	26
281	267	HINO MOTORS[5]	JAPAN	2,469.7[9]	19.7[9]	405	1,491.3[9]	408	501.8[9]	352	8,476[9]	383	40
282	323	TABACALERA[2]	SPAIN	2,460.9	46.9	309	1,361.2	421	390.0	398	8,476	384	21
283	291	RECKITT & COLMAN	BRITAIN	2,446.6	192.3	123	1,723.7	379	890.2	245	31,800	147	20
284	266	TEXACO LIMITED[10]	BRITAIN	2,440.6	97.8	214	1,564.8	395	680.8	296	3,384	477	29
285	453	SANKYO[5]	JAPAN	2,426.6	65.0	273	2,350.4	310	987.6	218	5,667	440	42
286	295	PIONEER ELECTRONIC[6]	JAPAN	2,423.6	75.2	244	1,995.7	349	1,136.7	196	12,745	324	36
287	299	ROWNTREE	BRITAIN	2,413.9	144.1	165	1,769.6	372	770.6	268	33,120	140	20
288	273	SEAGRAM[17]	CANADA	2,412.2	423.5	51	6,886.5	109	3,955.6	50	14,400	302	49
289	283	ENTREPRISE MINIÈRE ET CHIMIQUE[2]	FRANCE	2,402.6	(9.3)	454	1,637.2	391	153.0	471	13,305	319	10
290	•	TRELLEBORG	SWEDEN	2,397.8	35.3	343	2,715.0	274	214.5	457	21,945	223	33
291	•	HINDUSTAN PETROLEUM[7,5]	INDIA	2,390.2	37.6	330	925.2	469	182.2	466	8,423	385	29
292	319	HITACHI ZOSEN[5]	JAPAN	2,383.9	38.0	328	5,130.7	150	353.9	410	8,366	387	45
293	280	RANKS HOVIS MCDOUGALL[23]	BRITAIN	2,382.5	133.8	170	1,397.8	418	410.8	388	35,686	128	20
294	321	FORD ESPAÑA[10]	SPAIN	2,375.2	224.9	106	1,310.8	427	186.0	464	8,272	389	40
295	329	MEIJI MILK PRODUCTS[5]	JAPAN	2,349.0	17.4	414	1,064.6	454	331.9	420	7,114	409	20
296	275	IBM CANADA[10]	CANADA	2,340.7	174.2	139	1,830.5	366	1,252.9	176	12,147	338	44
297	314	SANYO-KOKUSAKU PULP[5]	JAPAN	2,336.5	31.3	360	2,548.2	295	315.4	426	7,695	398	26
298	279	MITSUBISHI PETROCHEMICAL	JAPAN	2,332.4	69.6	253	3,576.7	209	732.2	279	3,727	472	28
299	334	VALE DO RIO DOCE[24]	BRAZIL	2,324.0	(347.0)	493	6,689.4	115	2,934.8	71	29,124	166	10
300	341	ALPS ELECTRIC[5]	JAPAN	2,312.4	25.8	378	2,547.7	296	850.6	253	12,643	325	36

The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.



THE INTERNATIONAL 500

301-350

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE √
301	260	COAL INDIA[2,3]	INDIA	2,304.6	(259.7)	491	5,331.3	146	2,669.8	80	673,456	1	10
302	272	MOORE	CANADA	2,281.5	146.4	162	1,939.3	355	1,167.7	189	26,480	188	27
303	324	ZAHNRADFABRIK FRIEDRICHSHAFEN	W. GER.	2,260.5	15.3	422	2,215.1	324	374.3	405	24,639	202	40
304	•	ABITIBI-PRICE	CANADA	2,253.2	94.8	219	1,960.9	353	930.2	230	16,000	287	26
305	307	NISSHIN STEEL[5]	JAPAN	2,244.2	27.5	369	3,642.0	205	708.5	288	9,067	376	33
306	250	CANADA PACKERS[3]	CANADA	2,243.5	28.1	368	517.1	493	288.9	434	12,500	328	20
307	286	ROTHMANS INTERNATIONAL[5]	BRITAIN	2,231.3	147.9	159	2,666.7	280	820.5	258	19,000	244	21
308	•	LVMH[4,9]	FRANCE	2,203.8	223.4	107	3,813.4	201	1,408.2	160	12,311	333	49
309	296	SUMITOMO METAL MINING[5]	JAPAN	2,200.9	1.4	447	2,359.0	306	364.0	408	6,640	419	33
310	354	GENERAL MOTORS ESPAÑA	SPAIN	2,195.2	81.9	233	1,563.9	396	541.4	335	8,351	388	40
311	343	NOBEL INDUSTRIES	SWEDEN	2,193.0	82.1	232	3,043.5	248	323.5	421	18,122	255	28
312	335	NISSHIN FLOUR MILLING[5]	JAPAN	2,181.1	34.9	346	1,100.1	452	500.7	354	3,556	475	20
313	298	DAIDO STEEL[5]	JAPAN	2,175.8	17.3	415	2,252.8	320	431.2	379	10,944	357	33
314	313	LION	JAPAN	2,167.0	35.6	342	1,750.6	376	636.3	311	4,801	457	43
315	301	BOEHRINGER INGELHEIM	W. GERMANY	2,154.5	52.8	297	2,902.3	259	1,060.0	206	22,164	217	42
316	300	POLYSAR	CANADA	2,142.5	171.6	142	4,188.5	179	1,072.1	204	7,120	408	28
317	287	PLESSEY[4,5]	BRITAIN	2,133.4	173.5	140	2,135.1	333	958.7	224	31,044	140	36
318	340	CODELCO-CHILE[2,9]	CHILE	2,132.5	267.1	82	4,423.6	170	2,297.3	95	24,838	200	10
319	367	NICHIREI[17]	JAPAN	2,118.3	17.8	412	1,063.4	455	290.7	433	4,807	455	20
320	322	VALEO	FRANCE	2,118.1	59.9	282	2,226.9	323	589.2	321	25,100	196	40
321	312	SSAB (SVENSKT STAL)[10]	SWEDEN	2,107.3	10.1	436	2,134.6	334	551.9	329	14,352	303	33
322	294	KLÖCKNER-WERKE[4]	W. GERMANY	2,101.2	(208.7)	488	2,571.0	291	279.7	436	23,187	213	33
323	337	SHIN-ETSU CHEMICAL[19]	JAPAN	2,090.1	70.0	252	2,631.1	283	755.1	271	10,024	370	28
324	316	SANDVIK GROUP	SWEDEN	2,086.0	119.1	185	2,914.8	257	704.7	290	26,256	190	34
325	394	ITOHAM FOODS[5]	JAPAN	2,082.1	35.7	341	1,034.7	459	501.5	353	5,780	435	20
326	365	ONODA CEMENT[5]	JAPAN	2,077.1	20.4	402	3,003.4	250	487.8	363	6,518	422	32
327	381	HERAEUS HOLDING	W. GERMANY	2,074.3	20.5	400	1,126.2	446	538.4	337	7,900	395	33
328	331	YOKOHAMA RUBBER	JAPAN	2,063.3	31.4	359	2,412.0	302	350.0	411	10,750	360	30
329	339	KHD (KLÖCKNER-HUMBOLDT-DEUTZ)	W. GER.	2,051.1	(158.3)	485	1,982.2	352	395.0	394	19,539	237	45
330	230	CSR[5]	AUSTRALIA	2,031.9	73.1	247	2,798.3	268	1,287.7	173	13,406	316	32
331	410	SUMITOMO RUBBER	JAPAN	2,021.5	34.2	348	2,365.6	305	201.9	460	10,000	371	30
332	353	TOYO SASH[6]	JAPAN	2,018.4	52.1	299	1,798.6	370	639.1	308	4,530	464	34
333	350	ESSELTE	SWEDEN	2,016.0	53.6	295	1,756.1	375	339.0	417	19,395	239	44
334	364	TOYODA AUTOMATIC LOOM WORKS[5]	JAPAN	2,014.7[7]	58.9[8]	287	1,532.3[8]	399	944.1[8]	225	6,591[8]	420	40
335	284	NORTHERN FOODS[5]	BRITAIN	2,011.8	104.5	203	731.8	482	423.1	382	27,499	182	20
336	398	SUMITOMO HEAVY INDUSTRIES[5]	JAPAN	2,006.9	(62.6)	472	2,779.3	271	358.0	409	6,000	431	45
337	348	UNITIKA[5]	JAPAN	2,002.1	19.6	406	2,310.7	315	150.5	473	7,305	404	22
338	290	TEXACO CANADA[10]	CANADA	1,997.6	241.3	97	2,978.8	253	1,989.7	114	3,288	480	29
339	347	UNION INTERNATIONAL	BRITAIN	1,989.3	21.6	397	923.2	470	217.8	454	22,107	221	20
340	362	EMPRESA COLOMBIANA DE PETRÓL.[2]	COL	1,960.1	103.0	207	2,435.2	299	305.7	430	11,824	342	29
341	293	BURMAH OIL	BRITAIN	1,959.7	119.2	183	1,498.0	407	709.9	287	10,153	366	29
342	383	RAUMA-REPOLA	FINLAND	1,946.0	19.8	404	3,277.2	232	754.4	272	18,154	254	26
343	411	KEMIRA[2,4]	FINLAND	1,941.1	64.3	274	2,726.0	272	622.0	316	13,575	309	28
344	379	BRITOIL	BRITAIN	1,938.4	238.7	100	3,970.0	186	1,586.1	149	1,659	493	29
345	353	DOMTAR	CANADA	1,936.5	121.4	180	2,195.8	325	941.4	226	15,871	288	26
346	387	MORINAGA MILK INDUSTRY[5]	JAPAN	1,933.6	10.6	433	1,050.5	457	263.9	441	4,700	458	49
347	391	MINOLTA CAMERA[5]	JAPAN	1,930.7	45.0	314	2,119.1	336	606.9	318	11,200	351	38
348	325	RACAL ELECTRONICS[4,5]	BRITAIN	1,926.2	68.2	259	2,029.6	345	722.5	284	32,418	146	36
349	327	STELCO[4]	CANADA	1,920.2	47.8	304	2,156.3	329	1,025.4	213	16,960	270	33
350	297	CHARBONNAGES DE FRANCE[2]	FRANCE	1,892.0	(27.8)	460	5,127.8	151	185.4	465	39,478	121	28

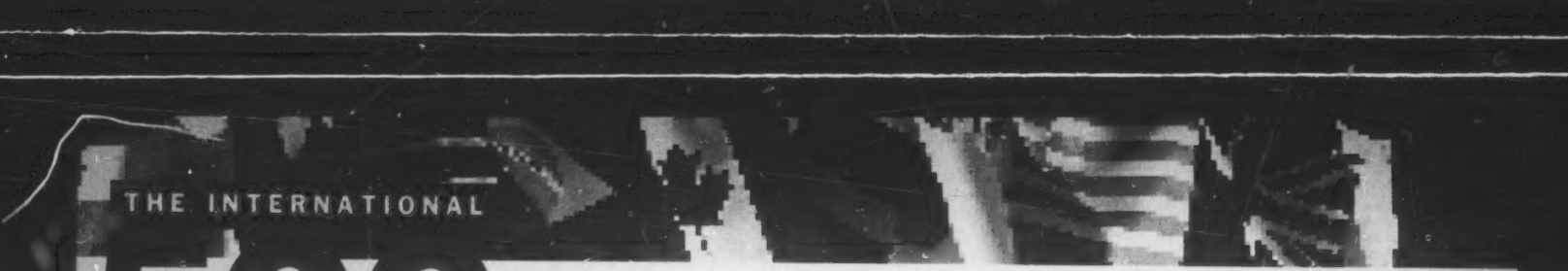
The definitions and concepts underlying the figures in this directory are explained on page D33. √ Industry code definitions appear on page D33. Footnotes appear on page D33.

THE INTERNATIONAL 500

351-400

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE
351	330	ISCOR[1]	SOUTH AFRICA	1,886.1	109.7	197	2,693.3	278	1,761.6	139	60,800	76	33
352	380	DAISHOWA PAPER MANUFACTURING[2]	JAPAN	1,864.3	46.8	310	2,892.2	260	270.1	440	5,190	449	26
353	•	DAF	NETHERLANDS	1,864.1	31.2	361	1,788.8	371	550.4	330	16,631	278	40
354	344	WHITBREAD[3]	BRITAIN	1,859.5	159.6	153	2,960.4	254	1,806.8	133	47,723	93	49
355	392	MEIJI SEIKA[4]	JAPAN	1,850.5	17.0	416	1,243.5	436	683.8	295	5,590	443	20
356	376	SOURCE PERRIER	FRANCE	1,838.9	94.9	218	2,071.6	341	241.9	449	11,000	356	20
357	•	SAINT LOUIS	FRANCE	1,823.8	243.4	94	1,503.4	406	660.2	301	10,742	356	20
358	302	JOHNSON MATTHEY[5]	BRITAIN	1,822.9	38.3	325	855.4	474	364.5	406	7,089	411	33
359	385	ENSO-GUTZEIT[6]	FINLAND	1,819.5	161.4	151	3,439.6	218	797.8	265	16,647	276	26
360	407	TOYOTA AUTO BODY[7]	JAPAN	1,815.0[8]	9.8[8]	437	593.1[8]	488	189.3[8]	462	6,979	415	40
361	369	ATLAS COPCO	SWEDEN	1,814.9	93.3	223	1,855.4	363	562.2	325	18,777	240	45
362	386	MITSUI MINING AND SMELTING[9]	JAPAN	1,812.2	(61.4)	471	2,096.9	339	84.8	484	6,903	417	33
363	414	MITSUBISHI MINING & CEMENT[10]	JAPAN	1,809.2	24.6	385	2,299.0	316	453.8	372	6,417	424	32
364	384	KANTO AUTO WORKS[11]	JAPAN	1,800.2[8]	11.0[8]	431	518.2[8]	492	152.6[8]	472	5,747[8]	436	40
365	378	FAG KUGELFISCHER GEORG SCHÄFER	W. GER.	1,794.8[4]	29.1	365	2,003.5	348	594.3	320	30,818	151	34
366	371	INCO	CANADA	1,789.5	125.2	176	2,994.4	251	1,194.6	185	18,706	250	10
367	360	FREUDENBERG	W. GERMANY	1,788.9[3]	N.A.		1,348.4	423	497.0	360	23,940	208	40
368	361	NICHIRO GYOGYO[12]	JAPAN	1,786.3	5.2	441	1,103.0	451	82.3	486	4,228	467	20
369	368	DR.ING.H.C.F.PORSCHE[13]	W. GERMANY	1,785.6	27.2	376	854.7	475	272.1	439	8,556	380	40
370	355	KONINKLIJKE WESSANEN	NETHERLANDS	1,785.3	39.6	324	724.2	484	321.8	422	5,355	447	20
371	374	ALFA-LAVAL[14]	SWEDEN	1,783.5	40.2	322	2,242.8	321	509.7	348	16,501	283	45
372	373	PERNOD RICARD	FRANCE	1,780.7	101.0	209	1,715.1	386	719.8	286	10,111	368	49
373	433	ASAHI BREWERIES	JAPAN	1,766.5	16.8	417	3,948.9	190	674.4	298	4,805	456	49
374	345	BLUE CIRCLE INDUSTRIES	BRITAIN	1,751.8	315.3	65	3,304.1	228	1,716.3	141	16,624	279	32
375	•	NOVA	CANADA	1,751.3	135.1	169	3,603.9	207	1,139.6	195	7,100	410	29
376	320	MITSUI MINING	JAPAN	1,750.5	(77.6)	476	1,908.1	358	100.9	480	2,189	490	10
377	366	WELLCOME[15]	BRITAIN	1,747.6	145.2	163	1,838.2	365	912.7	236	19,338	241	42
378	426	KYOCERA	JAPAN	1,746.6	109.3	198	2,928.7	256	2,058.5	108	17,000	268	36
379	428	OMRON TATEISI ELECTRONICS	JAPAN	1,742.7	19.1	408	2,045.9	342	744.0	277	13,364	318	36
380	404	LINDE	W. GERMANY	1,741.8	65.5	270	1,718.5	381	665.4	300	14,619	299	45
381	338	PACIFIC DUNLOP	AUSTRALIA	1,740.3	67.8	262	1,276.7	431	518.4	345	29,774	160	30
382	377	KYOWA HAKKO KOGYO	JAPAN	1,727.5	67.2	264	2,581.0	288	927.4	231	6,132	429	42
383	412	NIPPON SEIKO[16]	JAPAN	1,724.4	26.1	376	2,610.8	285	971.6	222	10,907	358	45
384	332	AMCOR	AUSTRALIA	1,722.1	67.8	263	1,341.8	424	624.1	315	33,300	139	26
385	336	ULTRAMAR	BRITAIN	1,708.0	77.2	241	2,891.0	261	1,144.2	194	3,306	479	29
386	370	CONSOLIDATED-BATHURST	CANADA	1,705.3	161.7	150	1,741.8	377	771.3	267	15,111	293	26
387	357	METAL BOX[17]	BRITAIN	1,697.7	82.8	231	1,182.1	441	510.5	347	26,090	191	34
388	388	MITSUBISHI RAYON[18]	JAPAN	1,692.5	22.3	394	2,146.7	330	507.6	350	7,384	403	28
389	401	KURARAY[19]	JAPAN	1,688.1	29.5	363	1,994.7	350	294.4	431	8,079	392	22
390	400	DAIKIN INDUSTRIES[20]	JAPAN	1,671.3	41.6	318	1,508.9	404	463.5	368	8,050	393	45
391	415	AGA	SWEDEN	1,668.6	70.3	251	2,574.1	289	638.0	310	16,138	286	28
392	424	PWA	W. GERMANY	1,668.2	37.3	334	1,177.2	442	240.0	450	9,851	373	26
393	•	RHEINMETALL BERLIN	W. GERMANY	1,661.1	35.0	344	1,364.3	420	82.6	485	14,863	295	45
394	•	E. MERCK	W. GERMANY	1,657.4[4]	80.0	235	1,878.3	361	603.3	260	20,704	231	28
395	430	CITIZEN WATCH[21]	JAPAN	1,652.4	20.4	401	1,709.6	383	658.9	302	12,163	337	38
396	459	SHIONOGI	JAPAN	1,650.9	57.3	291	1,890.7	360	984.0	219	8,397	386	42
397	417	VALMET[22]	FINLAND	1,650.4	11.1	430	1,806.5	369	416.2	387	17,342	263	45
398	437	JAGUAR	BRITAIN	1,642.6	100.5	210	1,416.6	417	499.8	357	12,483	330	40
399	409	INDUSTRIAS VOTORANTIM	BRAZIL	1,641.8	276.4	78	1,921.7	356	1,547.0	152	6,222	425	10
400	389	IVACO	CANADA	1,640.1	25.1	382	1,359.2	422	450.0	373	12,170	336	33

The definitions and concepts underlying the figures in this directory are explained on page D33. Industry code definitions appear on page D33. Footnotes appear on page D33.



THE INTERNATIONAL 500

401-450

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE
401	276	PIONEER CONCRETE SERVICES[1]	AUSTRALIA	1,637.0	111.9	193	1,759.0	374	658.8	303	8,500	381	29
402	393	DOFASCO	CANADA	1,631.2	116.1	189	2,353.7	309	1,337.2	170	13,400	317	33
403	418	CARL-ZEISS-STIFTUNG[4]	W. GERMANY	1,629.8	22.2	395	1,528.5	401	243.7	448	24,843	199	38
404	399	RHEINISCHE BRAUNKOHLENWERKE	W. GER.	1,627.1	(3.7)	451	4,185.8	180	587.0	323	16,500	284	10
405	304	IMETAL	FRANCE	1,615.6	22.6	392	1,116.7	449	433.0	376	5,806	433	10
406	429	AECI	SOUTH AFRICA	1,607.8	104.5	202	1,200.7	439	524.7	342	27,800	180	28
407	447	TOTO	JAPAN	1,594.1[9]	68.9[9]	255	1,856.7[9]	362	852.1[9]	252	8,004[9]	394	32
408	372	UNION LAITIÈRE NORMANDE	FRANCE	1,593.9	6.9	440	666.0	486	86.5	483	5,011	452	20
409	•	METSA-SERLA	FINLAND	1,589.6	22.1	396	2,421.4	301	377.1	404	12,865	322	26
410	442	NTN TOYO BEARING[5]	JAPAN	1,586.6	32.3	354	2,113.9	338	703.2	291	10,426	364	45
411	363	MITSUI PETROCHEMICAL INDUSTRIES[5]	JAPAN	1,581.8	32.3	352	2,572.7	290	424.5	381	5,003	453	28
412	•	BHARAT PETROLEUM[2,5]	INDIA	1,576.9	47.2	307	967.4	465	180.9	467	9,397	375	29
413	•	T&N[3]	BRITAIN	1,575.6	110.2	196	1,443.9	411	729.3	280	39,566	120	40
414	•	ARABIAN OIL	JAPAN	1,573.9	16.0	420	957.9	466	431.7	378	2,200	489	29
415	396	BORAL[1]	AUSTRALIA	1,573.5	(54.4)	469	1,677.1	388	727.9	281	18,500	251	32
416	375	ACI INTERNATIONAL[5]	AUSTRALIA	1,573.3	(5.9)	452	1,607.0	393	763.3	270	23,900	209	32
417	390	PEARSON	BRITAIN	1,560.8	392.3	56	2,022.7	346	1,120.8	197	23,250	211	27
418	400	MITSUI ENGINEERING & SHIPBLDG.[5]	JAPAN	1,557.5	(25.5)	459	3,206.6	236	588.1	322	9,422	374	45
419	434	AXEL SPRINGER VERLAG	W. GERMANY	1,548.0	53.6	294	774.6	481	26.0	489	11,452	348	27
420	406	DOUWE EGBERTS[1,10]	NETHERLANDS	1,537.1	80.2	234	1,122.0	447	500.5	355	7,682	399	20
421	454	YOSHIDA KOGYO[5]	JAPAN	1,528.8	71.7	250	3,322.4	226	935.4	228	13,916	307	32
422	271	ZAMBIA INDUSTRIAL & MINING[3]	ZAM	1,527.9	12.4	429	4,220.2	177	1,468.6	155	132,470	29	10
423	479	GRUNDIG[5]	W. GERMANY	1,523.7	53.6	296	1,172.6	443	399.1	392	19,478	238	36
424	440	SAPPORO BREWERIES	JAPAN	1,520.4	41.3	320	3,118.6	243	922.0	234	4,415	465	49
425	395	MITSUBISHI GAS CHEMICAL[5]	JAPAN	1,515.2	26.2	375	1,901.4	359	499.9	356	5,495	446	28
426	352	KYMMENE	FINLAND	1,513.1	35.8	339	3,073.3	245	940.5	227	9,876	372	26
427	•	COPERSUCAR[9]	BRAZIL	1,512.8	N.A.		337.2	495	5.0	491	3,500	476	28
428	469	RENGO[5]	JAPAN	1,498.7	13.7	424	1,104.5	450	233.8	451	4,600	461	26
429	464	NIHON CEMENT[20]	JAPAN	1,496.1	16.6	418	2,587.5	287	348.6	412	5,540	444	32
430	431	DOOSAN	SOUTH KOREA	1,478.2	35.0	345	1,517.8	403	307.2	429	14,793	296	49
431	•	SAGEM[4]	FRANCE	1,477.0	23.2	390	1,334.4	425	208.4	459	7,737	397	36
432	461	MEJERISELSKABET DANMARK[6,9]	DENMARK	1,471.8	61.9	278	471.3	494	128.8	475	4,694	460	20
433	•	BESNIER	FRANCE	1,466.8	32.3	353	295.4	496	19.7	490	5,664	441	20
434	425	REDLAND[5]	BRITAIN	1,461.0	117.7	187	1,843.2	364	802.5	261	12,366	332	32
435	423	FREE STATE CONSOL. GOLD MINES[4]	S. AFRICA	1,451.0	415.8	53	2,116.7	337	1,777.1	136	112,238	40	10
436	•	MAXWELL COMMUNICATION	BRITAIN	1,449.2	216.0	112	3,364.2	224	1,892.4	126	16,992	269	27
437	499	JEFFERSON SMURFIT GROUP[17]	IRELAND	1,447.8	37.2	335	1,188.7	440	278.7	437	13,522	315	26
438	413	IBM NEDERLAND[3,10]	NETHERLANDS	1,441.9	103.2	204	N.A.		N.A.		5,608	442	44
439	435	LIEBHERR INTERNATIONAL	SWITZERLAND	1,441.0	N.A.		N.A.		N.A.		13,136	320	45
440	451	CASIO COMPUTER[20]	JAPAN	1,436.6	18.0	411	1,813.0	368	801.5	262	7,590	401	44
441	•	ASCOM HOLDING	SWITZERLAND	1,433.9	27.4	371	1,539.8	398	667.7	294	14,264	304	36
442	•	PRIMA MEAT PACKERS[5]	JAPAN	1,433.3	4.1	444	587.9	489	124.1	476	3,780	471	20
443	481	EBARA[20]	JAPAN	1,428.0	4.3	443	1,643.5	390	528.5	340	6,186	427	45
444	336	CONOCO[10]	BRITAIN	1,425.3	(17.5)	457	1,222.9	437	837.2	255	1,474	495	29
445	452	ARLA[1]	SWEDEN	1,424.1	.5	449	581.5	490	120.3	477	6,220	426	20
446	351	SASOL[1]	SOUTH AFRICA	1,417.6	239.8	98	2,708.0	276	1,494.2	153	33,100	141	28
447	419	BHARAT HEAVY ELECTRICALS[2,5,11]	INDIA	1,416.0	59.7	283	2,340.6	312	466.9	367	74,918	60	36
448	457	IMI	BRITAIN	1,411.0	100.2	211	1,264.2	433	502.0	319	21,268	227	34
449	427	FORD MOTOR CO. OF AUSTRALIA	AUS.	1,410.9[10]	33.9	351	800.1	478	262.3	443	11,686	343	40
450	•	SABIC[2]	SAUDI ARABIA	1,410.4	287.8	76	6,300.7	125	2,045.9	110	8,105	391	28

The definitions and concepts underlying the figures in this directory are explained on page D33. √ Industry code definitions appear on page D33. Footnotes appear on page D33.

THE INTERNATIONAL 500

451-500

RANK BY SALES 1987	1986	COMPANY	COUNTRY	SALES $ Millions	NET INCOME $ Millions	Rank	ASSETS $ Millions	Rank	STOCK-HOLDERS' EQUITY $ Millions	Rank	EMPLOYEES Number	Rank	INDUSTRY CODE ✓
451	358	TI GROUP	BRITAIN	1,403.0	210.8	115	945.1	468	385.3	402	21,000	228	34
452	462	NISSHINBO INDUSTRIES[11]	JAPAN	1,400.9	36.0	338	1,419.3	415	829.7	256	7,836	396	22
453	441	PROUVOST	FRANCE	1,396.3	13.7	425	1,261.3	435	225.5	453	16,753	274	22
454	474	DENKI KAGAKU KOGYO[5]	JAPAN	1,396.3	20.2	403	2,182.8	327	422.0	383	5,340	448	28
455	467	NAN YA PLASTICS	TAIWAN	1,388.9	96.8	217	1,146.2	444	519.0	344	12,560	326	28
456	466	TOSOH[5,32]	JAPAN	1,387.8	16.2	419	2,341.7	311	343.3	413	5,695	438	28
457	456	GRUPO INDUSTRIAL ALFA	MEXICO	1,380.4	(365.6)	494	2,357.0	307	243.9	447	29,000	168	33
458	446	NISSAN DIESEL MOTOR[5]	JAPAN	1,380.3[9]	35.8[9]	340	1,696.3[9]	385	317.6[9]	425	5,667[9]	439	40
459	231	MOBIL OIL ITALIANA[10]	ITALY	1,371.6	(82.8)	477	807.4	476	59.8	487	1,055	497	29
460	•	COOKSON GROUP	BRITAIN	1,370.2	146.7	160	1,686.1	387	934.9	229	11,953	340	33
461	422	UNIÓN EXPLOSIVOS RIO TINTO	SPAIN	1,360.7	163.9	149	1,427.8	412	491.6	362	7,022	413	29
462	402	VARITY[17]	CANADA	1,359.3	(23.3)	458	1,504.1	405	342.1	415	18,969	245	45
463	460	DIESEL KIKI[12]	JAPAN	1,359.0	18.7	409	1,367.6	419	417.8	385	7,606	400	40
464	488	TOYO TIRE & RUBBER[5]	JAPAN	1,358.7	10.6	432	1,261.4	434	113.6	478	6,881	418	30
465	455	Q.P.[14]	JAPAN	1,354.9	21.2	399	1,028.6	460	336.5	419	3,722	473	20
466	458	BROTHER INDUSTRIES[33]	JAPAN	1,353.7	44.0	315	1,583.0	394	752.6	273	8,493	382	44
467	438	MOLSON[5]	CANADA	1,353.1	38.1	327	947.6	467	408.8	389	11,400	349	49
468	•	DU PONT (GERMANY)	W. GERMANY	1,352.9[9]	43.9[9]	316	857.8[9]	473	295.5[9]	432	4,192[9]	468	28
469	•	HEWLETT-PACKARD (GERMANY)	W. GERMANY	1,347.1[9]	61.2	279	1,096.5	453	425.9	380	5,130	450	44
470	•	WACKER-CHEMIE	W. GERMANY	1,342.5	25.3	381	991.8	463	385.5	401	11,943	341	28
471	471	A. AHLSTROM	FINLAND	1,338.2	21.2	398	2,241.1	322	556.4	327	11,033	354	26
472	468	SEITA[2,9]	FRANCE	1,334.2	29.5	364	1,722.5	380	443.1	375	6,963	416	21
473	•	ENSITE[10]	CANADA	1,327.6	79.1	240	235.4	497	542.0	334	5,899	432	40
474	470	GEORG FISCHER	SWITZERLAND	1,324.1	23.5	388	1,484.1	410	504.1	351	14,473	301	40
475	397	NORTHERN ENGINEERING INDUSTRIES	BRITAIN	1,318.9	23.4	389	1,053.5	456	229.0	452	20,731	230	45
476	421	CONSOLIDATED GOLD FIELDS[1]	BRITAIN	1,318.6	206.5	118	2,716.3	273	1,104.3	199	12,486	329	32
477	•	NIPPON SHEET GLASS[5]	JAPAN	1,318.0	31.8	357	1,657.3	389	654.4	305	5,721	437	32
478	•	GENERAL MOTORS CONTINENTAL[10]	BELGIUM	1,316.0	10.3	435	578.1	491	48.4	488	N.A.		40
479	•	AICHI MACHINE INDUSTRY[5]	JAPAN	1,310.5[9]	8.3[9]	439	623.5[9]	487	173.5[9]	468	4,534[9]	463	40
480	•	TAIO PAPER MFG.	JAPAN	1,300.6[9]	36.3[9]	337	1,559.0[9]	397	321.2[9]	423	2,600[9]	484	26
481	491	KANEGAFUCHI CHEMICAL INDUSTRY[5]	JAPAN	1,299.0	46.2	312	1,305.2	428	525.1	341	4,592	462	28
482	•	EZAKI GLICO[5]	JAPAN	1,296.8	30.4	362	1,042.4	458	462.2	369	3,343	478	20
483	492	VICKERS	BRITAIN	1,292.2	69.3	254	1,010.5	462	419.4	384	16,731	275	45
484	420	ARBED[9]	LUXEMBOURG	1,290.2	(59.6)	470	2,146.3	331	800.6	263	11,532	346	33
485	482	CARLSBERG[9,48]	DENMARK	1,285.3	68.3	257	1,423.6	413	508.8	349	14,141	305	49
486	•	PROCTER & GAMBLE (GERMANY)	W. GER.	1,285.2[10]	25.1	383	900.4	471	384.8	403	4,700	459	43
487	439	MOBIL OIL FRANÇAISE[10]	FRANCE	1,281.3	25.7	379	726.0	483	256.3	444	1,647	494	29
488	•	MURATA MFG.[50]	JAPAN	1,276.9	103.1	205	2,255.1	319	1,151.5	192	16,894	272	36
489	448	GENERAL ELECTRIC CANADA	CANADA	1,273.9	47.1	308	792.4	479	392.0	396	11,115	353	45
490	•	DMC (DOLLFUS MIEG)	FRANCE	1,271.8	32.1	356	1,017.6	461	307.2	428	12,287	335	22
491	478	VAAL REEFS EXPLOR. & MINING	S. AFRICA	1,269.9	177.3	134	1,311.9	426	964.7	223	51,414	87	10
492	•	IBM ESPAÑA[10]	SPAIN	1,266.2	158.4	154	682.7	485	395.6	393	4,184	469	44
493	•	BARILLA	ITALY	1,260.2	58.8	289	800.8	477	140.2	474	5,107	451	20
494	•	KONE	FINLAND	1,258.9	24.6	384	1,285.7	430	342.0	416	16,618	280	45
495	•	KOKUYO[6]	JAPAN	1,256.3	47.5	305	1,135.5	445	498.3	359	2,644	483	25
496	436	GENERAL MOTORS DO BRASIL[3,10]	BRAZIL	1,251.7	94.1	220	1,117.3	448	695.2	292	N.A.		40
497	•	TATUNG	TAIWAN	1,248.0	29.1	366	1,420.1	414	249.6	445	21,899	224	36
498	•	NGK INSULATORS[5]	JAPAN	1,235.3	41.2	321	1,525.7	402	640.8	306	8,600	379	32
499	483	SHOWA SANGYO[16]	JAPAN	1,232.0	17.4	413	778.3	480	216.4	456	2,232	488	20
500	•	AMATIL	AUSTRALIA	1,227.0	93.4	222	870.6	472	387.0	400	12,420	331	21
		TOTALS		2,522,265.3	78,161.7		2,757,506.9		871,810.1		18,501,156		

The definitions and concepts underlying the figures in this directory are explained on page D33. ✓ Industry code definitions appear on page D33. Footnotes appear on page D33.

CHANGE IN SALES

10 BIGGEST INCREASES†

	Sales rank	
FERRUZZI	253	471.2%
TRELLEBORG	290	435.4
INDÚSTRIAS VOTORANTIM	399	255.2
SIDERBRÁS	176	243.2
PEMEX (PETRÓLEOS MEXICANOS)	36	168.0
COPERSUCAR	427	159.1
YPF	147	156.8
USINOR-SACILOR	44	129.7
KF INDUSTRI	267	116.4
NORANDA	125	115.0

10 BIGGEST DECREASES†

	Sales rank	
DSM	158	38.7
ULTRAMAR	385	34.9
ESSO ITALIANA	254	31.4
MITSUBISHI HEAVY INDUSTRIES	45	30.0
PETROLIAM NASIONAL BERHAD	208	27.6
KUWAIT PETROLEUM	53	27.3
IDEMITSU KOSAN	79	25.9
CONOCO LTD.	444	23.4
MITSUBISHI OIL	210	22.9
NIPPON OIL	47	19.4

INDUSTRY MEDIANS

% OF INCREASES	
PUBLISHING, PRINTING	31.8
SCIENTIFIC & PHOTOGRAPHIC EQUIP.	30.4%
MOTOR VEHICLES AND PARTS	27.4
BUILDING MATERIALS	26.3
ELECTRONICS	25.8
FOOD	25.2
INDUSTRIAL AND FARM EQUIPMENT	23.4
FOREST PRODUCTS	22.7
BEVERAGES	22.6
TEXTILES	22.4
RUBBER PRODUCTS	21.8
CHEMICALS	20.7
COMPUTERS (INCLUDES OFFICE EQUIP.)	20.6
SOAPS, COSMETICS	20.6
PHARMACEUTICALS	19.7
METAL PRODUCTS	16.6
METALS	16.4
AEROSPACE	13.7
MINING, CRUDE-OIL PRODUCTION	13.6
TOBACCO	11.8
PETROLEUM REFINING	7.5

CHANGE IN PROFITS

10 BIGGEST INCREASES†

	Sales rank	
THORN EMI	148	20,192.0%
SAINT LOUIS	357	1,336.6
EMPRESA COLOMBIANA	340	847.0
NORANDA	125	730.3
DALGETY	77	692.7
UNIÓN EXPLOSIVOS RIO TINTO	461	684.8
HYUNDAI HEAVY INDUSTRIES	225	603.9
NISSAN DIESEL MOTOR	458	570.8
GUINNESS	192	515.9
HONSHU PAPER	278	497.4

10 BIGGEST DECREASES†

	Sales rank	
TAIYO FISHERY	109	99.0%
GENERAL MOTORS OF CANADA	40	98.8
ARLA	445	96.5
EBARA	443	93.5
PETROBRÁS	27	91.7
SUMITOMO METAL MINING	309	87.3
HOESCH	166	78.1
ESSO (GERMANY)	130	75.4
GENERAL SEKIYU	260	71.4
STEEL AUTHORITY OF INDIA	250	68.2

INDUSTRY MEDIANS

% OF INCREASES	
TOBACCO	67.0%
TEXTILES	60.8
FOREST PRODUCTS	59.6
BUILDING MATERIALS	52.9
FOOD	52.7
BEVERAGES	50.2
RUBBER PRODUCTS	46.9
METAL PRODUCTS	42.1
CHEMICALS	40.4
PUBLISHING, PRINTING	39.8
PHARMACEUTICALS	39.8
INDUSTRIAL AND FARM EQUIPMENT	33.3
AEROSPACE	29.8
METALS	25.4
MOTOR VEHICLES AND PARTS	24.7
PETROLEUM REFINING	24.6
MINING, CRUDE-OIL PRODUCTION	11.3
SOAPS, COSMETICS	10.0
COMPUTERS (INCLUDES OFFICE EQUIP.)	6.6
ELECTRONICS	6.2
% OF DECREASES	
SCIENTIFIC & PHOTOGRAPHIC EQUIP.	26.8%

†Listings exclude companies that lost money in 1986 or 1987.

THE MONEY LOSERS

	Sales rank	LOSS $ Millions
SIDERBRÁS*	176	$4,362.1
USINOR-SACILOR*	44	969.5
BRITISH COAL*	92	429.8
GRUPO INDUSTRIAL ALFA*	457	365.6
VALE DO RIO DOCE	299	347.0
INI*	39	344.9
COAL INDIA*	301	259.7
KOOR INDUSTRIES	265	252.0
STATOIL	66	227.5
KLÖCKNER-WERKE	322	208.7
BRITISH AEROSPACE	94	180.3
SAARBERGWERKE*	216	164.4
KHD	329	158.3
ISHIKAWAJIMA-HARIMA	116	145.8
NIPPON KOKAN	82	129.4
SANYO ELECTRIC	70	118.9
MCDERMOTT INTERNATIONAL	202	102.4
SNECMA*	273	94.3
SUMITOMO METAL INDUSTRIES	112	88.8
KAWASAKI HEAVY INDUSTRIES*	142	87.1
MOBIL OIL ITALIANA*	459	82.8
MITSUI MINING	376	77.6
OERLIKON-BÜHRLE*	272	77.6
KOBE STEEL	96	74.6
NIPPON STEEL	29	69.7
SUMITOMO HEAVY INDUSTRIES*	336	62.6
MITSUI MINING AND SMELTING*	362	61.4
ARBED	484	59.6
BORAL	415	54.4
ESSO ITALIANA	254	53.3
COCKERILL SAMBRE*	170	50.3
ROVER GROUP*	140	43.9
KANEBO	189	43.1
KAWASAKI STEEL	104	42.7
NIPPON LIGHT METAL*	266	41.4
HOOGOVENS GROEP	235	37.7
UBE INDUSTRIES	212	33.0
CHARBONNAGES DE FRANCE*	350	27.8
MITSUI ENGINEERING*	418	25.6
VARITY	462	23.3
CONOCO LIMITED	444	17.5
SHOWA DENKO	174	14.5
VEBA OEL	93	11.1
ENTREPRISE MINIÈRE ET CHIM.*	289	9.3
KONICA	255	7.1
ACI INTERNATIONAL	416	5.9
RHEINISCHE BKW	404	3.7
MITSUBISHI METAL	163	3.4

*Also lost money in 1986.

ARRIVALS AND DEPARTURES

NEWCOMERS

	1987 sales rank
ARABIAN OIL	414
ASCOM	441
BARILLA	493
BESNIER	433
BHARAT PETROLEUM	412
COPERSUCAR	427
CEA-INDUSTRIE	144
COOKSON GROUP	460
CRA	188
DU PONT DE NEMOURS DEUTSCHLAND	468
ELDERS IXL	108
ENSITE	473
EZAKI GLICO	482
FERRUZZI AGRICOLA	253
GENERAL MOTORS CONTINENTAL	478
HEWLETT-PACKARD (GERMANY)	469
HINDUSTAN PETROLEUM	291
IBM ESPAÑA	492
INI	39
KOKUYO	495
KONE	494
LVMH	308
MCDERMOTT INTERNATIONAL	202
MAXWELL COMMUNICATION	436
METSA-SERLA	409
MITSUBISHI MOTORS	56
MURATA MANUFACTURING	488
NGK INSULATORS	498
PETRONAS (PETROLIAM NASIONAL BHD)	208
PROCTER & GAMBLE (GERMANY)	486
REPSOL	84
RHEINMETALL BERLIN	393
SABIC	450
SIDERBRÁS	176
SAINT LOUIS	357
TAIO PAPER MANUFACTURING	480
TATUNG	497
TRELLEBORG	290
WACKER-CHEMIE	470

RETURNEES*

ABITIBI-PRICE (1985: 264)	304
AICHI MACHINE INDUSTRY (1982: 476)	479
ASSOCIATED BRITISH FOODS (1975: 84)	203
DAF (1979: 463)	353
DMC (DOLLFUS MIEG) (1982: 494)	490
E. MERCK (1984: 437)	394
NIPPON LIGHT METAL (1985: 278)	266
NIPPON SHEET GLASS (1984: 498)	477
NOVA (1984: 176)	375
PRIMA MEAT PACKERS (1984: 494)	442
SAGEM (1983: 457)	431
T&N (1982: 413)	413

DEPARTURES

	1986 sales rank
BABCOCK INTERNATIONAL[1]	315
BEGHIN-SAY[2]	349
BOLIDEN[2]	326
BOSCH-SIEMENS HAUSGERATE[3]	318
CHINA STEEL	489
CHRYSLER DE MÉXICO	485
DAICEL CHEMICAL INDUSTRIES	497
DAIKYO OIL[4]	141
DIEHL	496
DOME PETROLEUM	465
DOW CHEMICAL EUROPE[1]	165
DRG	498
EFIM[1]	162
EMP (EMPRESA NACIONAL DEL PETRÓLEO)[2]	178
ENGLISH CHINA CLAYS	494
ENSIDESA (EMPRESA NAC. SIDERÚRGICA)[2]	473
FICHTEL & SACHS[2]	490
FORD BRASIL[2]	408
GECHEM	432
GULF CANADA[1]	175
HATTORI SEIKO[5]	274
IMASCO[4]	170
ISRAEL AIRCRAFT INDUSTRIES	495
KOA OIL	303
LESIEUR[2]	463
MACMILLAN BLOEDEL[2]	311
MARUZEN OIL[4]	113
METALLURGIE HOBOKEN-OVERPELT	477
MO OCH DOMSJO	487
MOBIL OIL (BRITAIN)	472
MOBIL OIL CANADA	445
MOËT-HENNESSY[2]	480
NORCEM[4]	416
OUTOKUMPU[1]	382
PETROGAL (PETRÓLEOS DE PORTUGAL)[1]	356
PREUSSAG[4]	148
SACILOR[2]	80
SCHINDLER HOLDING	486
SIDOR (SIDERÚRGICA DEL ORINOCO)	405
SIDERÚRGICA NACIONAL	500
SMH	493
SNIA BPD[2]	342
STANDARD ELEKTRIK LORENZ[2]	232
SUPERFOS	449
SWEDYARDS	450
SYNTEX	484
TOKYO SANYO ELECTRIC[2]	197
VALLOUREC	328
VAN LEER	476
VÖEST-ALPINE[1]	68
WÄRTSILÄ	442

*Figures in parentheses indicate year and sales rank the last time the company was listed. [1]Financial data not available. [2]Acquired by another FORTUNE International 500 company. [3]Sales are consolidated in accounts of Robert Bosch. [4]New company created through merger with another oil company does not qualify as an industrial. [5]No longer classified as an industrial.

THE 500 BY COUNTRY

	1-100	101-200	201-300	301-400	401-500	Total	Largest Company	$ Millions	Rank
ARGENTINA	0	1	0	0	0	1	YPF (YACIMIENTOS PETROLIFEROS)	4,774.7	147
AUSTRALIA	0	4	0	3	5	12	ELDERS IXL	6,169.3	108
AUSTRIA	0	0	1	0	0	1	OMV	2,745.9	248
BELGIUM	1	2	0	0	1	4	PETROFINA	8,583.2	64
BRAZIL	1	1	1	1	2	6	PETROBRAS (PETRÓLEO BRASILEIRO)	15,640.5	27
BRITAIN	11	18	19	14	11	73	BRITISH PETROLEUM	45,205.9	2
BRITAIN/NETHERLANDS	2	0	0	0	0	2	ROYAL DUTCH/SHELL GROUP	78,319.3	1
CANADA	4	6	3	11	5	29	GENERAL MOTORS OF CANADA	12,732.4	40
CHILE	0	0	0	1	0	1	CODELCO-CHILE	2,132.5	318
COLOMBIA	0	0	0	1	0	1	EMPRESA COLOMBIANA DE PETRÓLEOS	1,960.1	340
DENMARK	0	0	0	0	2	2	MEJERISELSKABET DANMARK	1,471.8	432
FINLAND	0	1	1	4	4	10	NESTE	6,392.8	101
FRANCE	11	8	8	6	8	41	RENAULT	24,539.7	14
INDIA	1	1	2	1	2	7	INDIAN OIL	8,629.0	63
IRELAND	0	0	0	0	1	1	JEFFERSON SMURFIT GROUP	1,447.8	437
ISRAEL	0	0	1	0	0	1	KOOR INDUSTRIES	2,571.1	265
ITALY	4	1	2	0	2	9	IRI	41,270.0	4
ITALY/SWITZERLAND	0	1	0	0	0	1	PIRELLI	5,615.0	122
JAPAN	26	33	33	35	30	157	TOYOTA MOTOR	41,455.0	3
KUWAIT	1	0	0	0	0	1	KUWAIT PETROLEUM	10,107.0	53
LUXEMBOURG	0	0	0	0	1	1	ARBED	1,290.2	484
MALAYSIA	0	0	1	0	0	1	PETRONAS	3,214.5	208
MEXICO	1	0	0	0	1	2	PEMEX (PETRÓLEOS MEXICANOS)	13,130.4	36
NETHERLANDS	2	1	2	2	2	9	PHILIPS' GLOEILAMPENFABRIEKEN	26,021.2	12
NETHERLANDS ANTILLES	0	1	0	0	0	1	SCHLUMBERGER	4,402.0	160
NEW ZEALAND	0	0	1	0	0	1	FLETCHER CHALLENGE	2,893.7	234
NORWAY	2	0	0	0	0	2	STATOIL	8,337.5	66
PANAMA	0	0	1	0	0	1	MCDERMOTT	3,289.3	202
SAUDI ARABIA	0	0	0	0	1	1	SABIC	1,426.3	450
SOUTH AFRICA	1	0	1	1	4	7	BARLOW RAND	7,617.9	78
SOUTH KOREA	4	4	2	0	1	11	SAMSUNG	21,053.5	20
SPAIN	2	0	3	1	2	8	INI	12,738.0	39
SWEDEN	4	1	7	7	1	20	VOLVO	14,576.0	30
SWITZERLAND	3	4	3	0	3	13	NESTLÉ	23,625.9	16
TAIWAN	0	1	0	0	2	3	CHINESE PETROLEUM	5,861.7	114
TURKEY	0	3	0	0	0	3	TURKIYE PETROLLERI	5,720.0	117
VENEZUELA	1	0	0	0	0	1	PETRÓLEOS DE VENEZUELA	8,290.5	67
W. GERMANY	18	8	8	12	8	54	DAIMLER-BENZ	37,535.5	5
ZAMBIA	0	0	0	0	1	1	ZAMBIA INDUSTRIAL & MINING	1,527.9	422

SALES

All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales do not include excise taxes or customs duties levied according to either volume or value sales, and so the figures for some companies—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the companies themselves. Unless otherwise noted, figures exclude intracompany transactions and include consolidated subsidiaries more than 50% owned, either fully or on a prorated basis. Figures have been converted to dollars using an exchange rate that consists of the official average rate during each company's fiscal year (ended December 31, 1987, unless otherwise noted).

NET INCOME

Net income is shown after taxes, minority interests, and extraordinary items. Figures have been converted to dollars using an exchange rate that consists of the official average rate during each company's fiscal year (ended December 31, 1987, unless otherwise noted).

ASSETS

Totals shown at each company's year-end. Figures have been converted to dollars at the official exchange rate at each company's year-end.

STOCKHOLDERS' EQUITY

Stockholders' equity is shown at each company's year-end. Minority interest is not included. Figures have been converted to dollars at the official exchange rate at each company's year-end.

EMPLOYEES

The figure shown is either a year-end or yearly average number as published.

INDUSTRY CODE

Industry code numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on page D29. The median figures in the tables refer only to results of companies in the 500. No attempt has been made to calculate medians in groups with fewer than four companies.

10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles
23	Apparel
25	Furniture
26	Forest products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber products
31	Leather
32	Building materials
33	Metals
34	Metal products
36	Electronics
37	Transportation equipment
38	Scientific and photographic equipment
40	Motor vehicles and parts
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Computers
45	Industrial and farm equipment
46	Jewelry, silverware
47	Toys, sporting goods
49	Beverages

The figures in this FORTUNE International 500 Directory were prepared by William Bellis and Frederick Hiroshi Katayama.

FOOTNOTES TO THE 500

- • Indicates that a corporation was not among the 500 in 1986.
- N.A. Not Available.
- [1] Figures are for fiscal year ended June 30, 1987.
- [2] Government-owned.
- [3] Figure is a FORTUNE estimate.
- [4] Figures include some significant subsidiaries owned 50% or less, either fully or on a prorated basis.
- [5] Figures are for fiscal year ended March 31, 1987.
- [6] Figures are for fiscal year ended September 30, 1987.
- [7] Company's figures are unaudited due to change in fiscal year-end from November 20, 1986, to March 31, 1987.
- [8] Figures are for fiscal year ended February 28, 1987.
- [9] Figures are for parent company only.
- [10] Revenues may include sales to the U.S. parent company or to other affiliates also on this list.
- [11] Merger of Usinor and Sacilor on December 30, 1987.
- [12] Figures are for fiscal year ended October 31, 1987.
- [13] Figures are for fiscal year ended October 20, 1987.
- [14] Figures are for fiscal year ended November 30, 1987.
- [15] Company's figures are unaudited due to change in fiscal year-end from October 31, 1986, to March 31, 1987.
- [16] Company changed its name to NKK on June 8, 1988.
- [17] Figures are for fiscal year ended January 31, 1987.
- [18] Company changed its name to Mitsubishi Kasei on June 1, 1988.
- [19] Figures are for fiscal year ended May 31, 1987.
- [20] Figures are for fiscal year ended April 30, 1987.
- [21] Figures are for fiscal year ended April 15, 1987.
- [22] Company changed its name from Continental Gummi-Werke on June 24, 1987.
- [23] Company changed its name from Konishiroku Photo Industry on October 21, 1987.
- [24] Figures are for fiscal year ended April 20, 1987.
- [25] Company changed its name to Yamaha on October 1, 1987.
- [26] Figures are for fiscal year ended July 31, 1987.
- [27] Figures are for fiscal year ended August 31, 1987.
- [28] Merger of Louis Vuitton and Moët-Hennessy on September 2, 1987.
- [29] Company changed its name from Canada Development Corp. on December 31, 1987.
- [30] Figures are for fiscal year ended March 20, 1987.
- [31] Figures are for fiscal year ended April 25, 1987.
- [32] Company changed its name from Toyo Soda Manufacturing on October 1, 1987.
- [33] Figures are for fiscal year ended November 20, 1987.
- [34] Company changed its name from United Breweries on January 1, 1988.

ALPHABETICAL INDEX TO THE INTERNATIONAL 500

INDEX

COMPANY	Sales rank
A	
ABITIBI-PRICE	304
ACI INTERNATIONAL	416
ADAM OPEL	55
AECI	406
AÉROSPATIALE	134
AGA	391
AHLSTROM	471
AICHI MACHINE INDUSTRY	479
AISIN SEIKI	220
AJINOMOTO	222
AKZO GROUP	76
ALCAN ALUMINIUM	97
ALFA-LAVAL	371
ALLIED-LYONS	155
ALPS ELECTRIC	300
ALUSUISSE (SWISS ALUMINIUM)	193
AMATIL	500
AMCOR	384
ARABIAN OIL	414
ARBED	484
ARLA	445
ASAHI BREWERIES	373
ASAHI CHEMICAL INDUSTRY	121
ASAHI GLASS	113
ASCOM	441
ASEA	68
ASSOCIATED BRITISH FOODS	203
ATLAS COPCO	361
AVIONS MARCEL DASSAULT	277
AXEL SPRINGER VERLAG	419
B	
BARILLA	493
BARLOW RAND	78
BASF	17
BASS	169
BAT INDUSTRIES	41
BAYER	21
BEECHAM GROUP	168
BERTELSMANN	150
BESNIER	433
BHARAT HEAVY ELECTRICALS	447
BHARAT PETROLEUM	412
BICC	167
BLUE CIRCLE INDUSTRIES	374
BMW	52
BOC GROUP	219
BOEHRINGER INGELHEIM	315
BORAL	415
BOSCH (ROBERT)	34
BRIDGESTONE	120
BRITISH AEROSPACE	94
BRITISH COAL	92
BRITISH PETROLEUM	2
BRITISH STEEL	136
BRITOIL	344
BROKEN HILL PROPRIETARY	115
BROTHER INDUSTRIES	466
BROWN BOVERI	88
BSN	107
BTR	89
BULL	223
BURMAH OIL	341
C	
CADBURY SCHWEPPES	200
CANADA PACKERS	306
CANADIAN PACIFIC	60
CANON	91
CARLSBERG	485
CARL-ZEISS-STIFTUNG	403
CASIO COMPUTER	440
CDF-CHEMIE	198
CEA-INDUSTRIE	144
CEPSA	221
CGE	18
CHARBONNAGES DE FRANCE	350
CHINESE PETROLEUM	114
CHRYSLER CANADA	126
CIBA-GEIGY	50
CITIZEN WATCH	395
COAL INDIA	301
COATS VIYELLA	228
COCKERILLSAMBRE	170
CODELCO-CHILE	318
CONOCO	444
CONSOLIDATED-BATHURST	386
CONSOLIDATED GOLD FIELDS	476
CONTINENTAL	242
COOKSON GROUP	460
COPERSUCAR	427
COURTAULDS	195
CRA	188
CSR	330
D	
DAEWOO	35
DAF	353
DAIDO STEEL	313
DAIHATSU MOTOR	172
DAIKIN INDUSTRIES	390
DAIMLER-BENZ	5
DAINIPPON INK AND CHEMICALS	245
DAI NIPPON PRINTING	128
DAISHOWA PAPER MFG.	352
DALGETY	77
DE BEERS CON. MINES	217
DEGUSSA	103
DENKI KAGAKU KOGYO	454
DEUTSCHE BABCOCK	264
DEUTSCHE TEXACO	252
DIESEL KIKI	463
DMC (DOLLFUS MIEG)	490
DOFASCO	402
DOMTAR	345
DOOSAN	430
DOUWE EGBERT	420
DSM	158
DU PONT	468
E	
EBARA	443
ELDERS IXL	108
ELECTROLUX	49
ELF-AQUITAINE	19
EMPRESA COL. DE PETRÓL.	340
ENI	15
ENSITE	473
ENSO-GUTZEIT	359
ENTREPRISE MINIÈRE ET CHIM.	289
ERICSSON (L.M.) TELEPHONE	139
ESSELTE	333
ESSO (FRANCE)	244
ESSO (GERMANY)	130
ESSO ITALIANA	254
ESSO UK	102
EZAKI GLICO	482
F	
FAG KUGEL. G. SCHÄFER	365
FELDMÜHLE NOBEL	127
FERRUZZI AGRICOLA	253
FIAT	8
FLETCHER CHALLENGE	234
FORD ESPAÑA	294
FORD MOTOR (BRITAIN)	65
FORD MOTOR OF AUSTRALIA	449
FORD MOTOR OF CANADA	51
FORD-WERKE (GERMANY)	57
FREE STATE CONSOLIDATED	435
FREUDENBERG	367
FUJI ELECTRIC	197
FUJI HEAVY INDUSTRIES	157
FUJI PHOTO FILM	133
FUJITSU	43
FURUKAWA ELECTRIC	182
G	
GALLAHER	239
GEC (GENERAL ELECTRIC CO.)	73
GENERAL ELECTRIC CANADA	489
GENERAL MOTORS CONT'L	478
GENERAL MOTORS DO BRASIL	496
GENERAL MOTORS ESPAÑA	310
GENERAL MOTORS OF CANADA	40
GENERAL SEKIYU	260
GEORG FISCHER	474
GKN	214
GLAXO HOLDINGS	258
GRAND METROPOLITAN	75
GRUNDIG	423
GRUPO INDUSTRIAL ALFA	457
GUINNESS	192
H	
HACHETTE	238
HANSON TRUST	62
HAWKER SIDDELEY GROUP	241
HEINEKEN	249
HENKEL	137
HERAEUS HOLDING	327
HEWLETT-PACKARD (GERMANY)	469
HILLSDOWN HOLDINGS	141
HINDUSTAN PETROLEUM	291
HINO MOTORS	281
HITACHI	7
HITACHI ZOSEN	292
HOECHST	22
HOESCH	166
HOLDERBANK FINANCIÈRE	279
HONDA MOTOR	26
HONSHU PAPER	278
HOOGOVENS GROEP	235
HÜLS	274
HYOSUNG	206
HYUNDAI HEAVY INDUSTRIES	225
HYUNDAI MOTOR	191
I	
IBM CANADA	296
IBM DEUTSCHLAND	100
IBM ESPAÑA	492
IBM FRANCE	105
IBM JAPAN	81
IBM NEDERLAND	438
IBM U.K. HOLDINGS	118
IDEMITSU KOSAN	79
IMETAL	405
IMI	448
IMPERIAL CHEMICAL INDUSTRIES	25
IMPERIAL OIL	132
INCO	366
INDIAN OIL	63
INDÚSTRIAS VOTORANTIM	399
INI	39
INTERNATIONAL THOMSON	185
IRI	4
ISCOR	351
ISHIKAWAJIMA-HAR. HVY. IND.	116
ISUZU MOTORS	83
ITOHAM FOODS	325
IVACO	400
J	
JACOBS SUCHARD	165
JAGUAR	398
JAPAN TOBACCO	95
JEFFERSON SMURFIT GROUP	437
JOHNSON MATTHEY	358
JUJO PAPER	257
K	
KANEBO	189
KANEGAFUCHI CHEMICAL IND.	481
KANTO AUTO WORKS	364
KAO	232
KAWASAKI HEAVY INDUSTRIES	142
KAWASAKI STEEL	104
KEMIRA	343
KF INDUSTRI	267
KHD	329
KIRIN BREWERY	184
KLÖCKNER-WERKE	322
KOBE STEEL	96
KOÇ HOLDING	149
KOKUYO	495
KOMATSU	138
KONE	494
KONICA	255
KONINKLIJKE WESSANEN	370
KOOR INDUSTRIES	265
KOREA EXPLOSIVES	181
KRUPP (FRIED.)	72
KUBOTA	164
KURARAY	389
KUWAIT PETROLEUM	53
KYMMENE	426
KYOCERA	378
KYOWA HAKKO KOGYO	382
L	
LABATT (JOHN)	247
LAFARGE-COPPÉE	211
L'AIR LIQUIDE	173
LIEBHERR INTERNATIONAL	439
LINDE	380
LION	214
L'ORÉAL	199
LUCAS INDUSTRIES	268
LUCKY-GOLDSTAR	32
LVMH	308
M	

ALPHABETICAL INDEX TO THE INTERNATIONAL 500

COMPANY	Sales rank
MAN	80
MANNESMANN	59
MATRA	240
MATSUSHITA ELECTRIC IND.	10
MATSUSHITA ELECTRIC WORKS	152
MAXWELL COMMUNICATION	436
MAZDA MOTOR	46
MCDERMOTT INTERNATIONAL	202
MEIJI MILK PRODUCTS	295
MEIJI SEIKA	355
MEJERISELSKABET DANMARK	432
MERCK (E.)	394
METAL BOX	387
METALLGESELLSCHAFT	85
METSA-SERLA	409
MICHELIN	74
MINOLTA CAMERA	347
MITSUBISHI CHEMICAL IND.	106
MITSUBISHI ELECTRIC	38
MITSUBISHI GAS CHEMICAL	425
MITSUBISHI HEAVY INDUSTRIES	45
MITSUBISHI METAL	163
MITSUBISHI MINING & CEMENT	363
MITSUBISHI MOTORS	56
MITSUBISHI OIL	210
MITSUBISHI PETROCHEMICAL	298
MITSUBISHI RAYON	388
MITSUI ENG. & SHIPBLDG.	418
MITSUI MINING	376
MITSUI MINING AND SMELTING	362
MITSUI PETROCHEMICAL IND.	411
MITSUI TOATSU CHEMICALS	262
MOBIL OIL FRANÇAISE	487
MOBIL OIL (GERMANY)	233
MOBIL OIL ITALIANA	459
MOLSON	467
MONTEDISON	48
MOORE	302
MORINAGA MILK INDUSTRY	346
MURATA MANUFACTURING	488
N	
NAN YA PLASTICS	455
NEC	28
NESTE	101
NESTLÉ	16
NEWS CORP.	187
NGK INSULATORS	498
NICHIREI	319
NICHIRO GYOGYO	368
NIHON CEMENT	429
NIPPONDENSO	86
NIPPON GAKKI	261
NIPPON KOKAN	82
NIPPON LIGHT METAL	266
NIPPON MEAT PACKERS	227
NIPPON MINING	162
NIPPON OIL	47
NIPPON SEIKO	383
NIPPON SHEET GLASS	477
NIPPON STEEL	29
NIPPON SUISAN	205
NISSAN DIESEL MOTOR	458
NISSAN MOTOR	13
NISSAN SHATAI	237
NISSHINBO INDUSTRIES	452
NISSHIN FLOUR MILLING	312
NISSHIN STEEL	305
NIXDORF COMPUTER	243
NOBEL INDUSTRIES	311
NOKIA	209
NORANDA	125
NORSK-HYDRO	69
NORTHERN ENGINEERING	475
NORTHERN FOODS	335
NORTHERN TELECOM	146
NOVA	375
NTN TOYO BEARING	410
O	
OERLIKON-BÜHRLE	272
OIL & NATURAL GAS	171
OJI PAPER	204
OKI ELECTRIC INDUSTRY	270
OLIVETTI	119
OMRON TATEISI ELECTRONICS	379
ÖMV	248
ONODA CEMENT	326
P	
PACIFIC DUNLOP	381
PEARSON	417
PECHINEY	99
PEMEX (PETRÓLEOS MEXICANOS)	36
PERNOD RICARD	372
PETROBRÁS	27
PETRO-CANADA	175
PETROFINA	64
PETRÓLEOS DE VENEZUELA	67
PETRONAS	208
PEUGEOT	24
PHILIPS	12
PILKINGTON BROTHERS	213
PIONEER CONRETE SERVICES	401
PIONEER ELECTRIC	286
PIRELLI	122
PLESSEY	317
POHANG IRON & STEEL	186
POLYSAR	316
PORSCHE	369
PRIMA MEAT PACKERS	442
PROCORDIA	269
PROCTER & GAMBLE (GER.)	486
PROUVOST	453
PWA	392
Q	
Q.P.	465
R	
RACAL ELECTRONICS	348
RANKS HOVIS MCDOUGALL	293
RANK XEROX	190
RAUMA-REPOLA	342
RECKITT & COLMAN	283
REDLAND	434
REED INTERNATIONAL	231
RENAULT	14
RENGO	428
REPSOL	84
RHEINISCHE BKW	404
RHEINMETALL BERLIN	393
RHÔNE-POULENC	58
RICOH	177
RMC GROUP	230
ROCHE/SAPAC	135
ROLLS-ROYCE	196
ROTHMANS INTERNATIONAL	307
ROVER GROUP	140
ROWNTREE	287
ROYAL DUTCH/SHELL GROUP	1
RTZ	124
RUHRKOHLE	42
S	
SAAB-SCANIA	98
SAARBERGWERKE	216
SABANCI (HACIOMER)	178
SABIC	450
SAGEM	431
SAINT LOUIS	357
SAINT-GOBAIN	37
SALZGITTER	161
SAMSUNG	20
SANDOZ	110
SANDVIK GROUP	324
SANKYO	285
SANYO ELECTRIC	70
SANYO-KOKUSAKU PULP	297
SAPPORO BREWERIES	424
SASOL	446
SCHERING	263
SCHLUMBERGER	160
SCHNEIDER	145
SEAGRAM	288
SEITA	472
SEKISUI CHEMICAL	246
SHARP	87
SHIN-ETSU CHEMICAL	323
SHIONOGI	396
SHISEIDO	275
SHOWA DENKO	174
SHOWA SANGYO	499
SHOWA SHELL SEKIYU	61
SIDERBRÁS	176
SIEMENS	9
SKF	218
SNECMA	273
SNOW BRAND MILK PRODUCTS	129
SOLVAY	111
SONY	71
SOURCE PERRIER	356
SSAB (SVENSKT STAL)	321
SSANGYONG	153
STATOIL	66
STC	194
STEEL AUTHORITY OF INDIA	250
STELCO	349
STORA KOPPARBERG	207
SULZER BROTHERS	215
SUMITOMO CHEMICAL	123
SUMITOMO ELECTRIC IND.	154
SUMITOMO HEAVY INDUSTRIES	336
SUMITOMO METAL INDUSTRIES	112
SUMITOMO METAL MINING	309
SUMITOMO RUBBER	331
SUNKYONG	90
SUZUKI MOTOR	131
SVENSKA CELLULOSA	280
SWEDISH MATCH	276
T	
TABACALERA	282
TAIO PAPER MANUFACTURING	480
TAIYO FISHERY	109
TAKEDA CHEMICAL	180
T&N	413
TARMAC	183
TATE & LYLE	259
TATUNG	497
TDK	256
TEIJIN	201
TEXACO (BRITAIN)	284
TEXACO CANADA	338
THOMSON	54
THORN EMI	148
THYSSEN	33
TI GROUP	451
TOA NENRYO KOGYO	159
TOPPAN PRINTING	143
TORAY INDUSTRIES	156
TOSHIBA	23
TOSOH	456
TOTAL	31
TOTO	407
TOYOBO	236
TOYODA AUTO. LOOM WORKS	333
TOYO SASH	332
TOYO SEIKAN	179
TOYO TIRE & RUBBER	464
TOYOTA AUTO BODY	360
TOYOTA MOTOR	3
TRELLEBORG	290
TÜRKIYE PETROLLERI	117
U	
UBE INDUSTRIES	212
ULTRAMAR	385
UNIGATE	229
UNILEVER	11
UNIÓN EXPLOSIVOS RIO TINTO	461
UNION INTERNATIONAL	339
UNION LAITIÈRE NORMANDE	408
UNITED BISCUITS	224
UNITIKA	337
USINOR-SACILOR	44
V	
VAAL REEFS EXPLOR. & MINING	491
VALE DO RIO DOCE	299
VALEO	320
VALMET	397
VARITY	462
VAUXHALL MOTORS	251
VEBA OEL	93
VIAG	151
VICKERS	483
VOLKSWAGEN	6
VOLVO	30
W	
WACKER-CHEMIE	470
WELLCOME	377
WHITBREAD	354
Y	
YAMAHA MOTOR	226
YAMAZAKI BAKING	271
YOKOHAMA RUBBER	328
YOSHIDA KOGYO	421
YPF	147
Z	
ZAHNRADFABRIK FRIEDRI	303
ZAMBIA INDUSTRIAL & MINING	422

THE 100 BIGGEST BANKS

THE FORTUNE DIRECTORY OF THE LARGEST BANK CORPORATIONS OUTSIDE THE U.S.

JAPANESE BANKS continue to dominate the list, as they have for the past decade. Only two of the top ten are European, Crédit Agricole (No. 7) and Banque Nationale de Paris (No. 9), both in France. The rest are Japanese. The big five—Dai-Ichi Kangyo, Sumitomo, Fuji, Mitsubishi, and Sanwa—are bigger than ever in terms of assets.

The Japanese have been aggressive worldwide lenders, especially in bank-to-bank transactions. They hold some $1.2 trillion of such loans, nearly half the global total. But they have been quiet in one area where European banks have been frenetic, mergers and acquisitions. To prepare for the European Economic Community's sweeping financial deregulation in 1992, the Continent's major banks have been charging across borders. France's Crédit Lyonnais (No. 13) bought Holland's Nederlandse Credietbank last year. Amsterdam-Rotterdam (No. 44) plans a merger with Générale de Banque of Belgium (No. 55). Germany's Deutsche Bank (No. 11) acquired BankAmerica's network of some 100 branches in Italy.

Since Tokyo's giants are eager to expand in Europe, some analysts have been puzzled by their absence in the takeover game. There appear to be two reasons. Foreign acquisitions would require huge outlays of precious yen, while returns would be valued in weaker currencies. In addition, Japanese bankers want to avoid actions that might provoke a xenophobic backlash. But don't bet such attitudes will never change.

Some grand old names in British banking, including Barclays (No. 14) and Lloyds (No. 40), took multimillion-dollar write-downs on Third World debt. That clobbered their earnings, but set the stage for much better performance next year. Only about 3% of Barclays' total loans are to Third World borrowers now, compared with 12% for major U.S. banks.

Sweden's Svenska Handelsbanken (No. 91) returned to the list after a year's lapse, as did Spain's Banco Hispano Americano (No. 99). Trustees Savings Bank of Britain joined the top 100 as No. 89 along with Belgium's Kredietbank, which became No. 96. Dropping off the list were Bank Hapoalim and Bank Leumi in Israel, Australia's Commonwealth Banking Corp., Banco di Sicilia of Italy, and Bank of Fukuoka in Japan.

The Bank of China appears for the first time, though not because it has suddenly grown huge. Since it handles all commercial banking in the People's Republic as well as central bank functions, it has doubtless been big enough to make the grade for a long time. This is the first year the government has been forthcoming with figures, possibly because the bank reported a profit of more than $1 billion. Such openness did not extend to the land of *glasnost*. FORTUNE's request for information from Vneshtorgbank, the Soviet state bank rumored to have assets of nearly $40 billion, produced a crisp *nyet*.

– Jonas Bernard Blank and Constance A. Gustke

RANK BY ASSETS 1987	1986	COMPANY
1	1	DAI-ICHI KANGYO BANK[7]
2	3	SUMITOMO BANK[7]
3	2	FUJI BANK[7]
4	4	MITSUBISHI BANK[7]
5	5	SANWA BANK[7]
6	6	INDUSTRIAL BANK OF JAPAN[6,7]
7	– 7	CRÉDIT AGRICOLE[10]
8	11	NORINCHUKIN BANK[7]
9	8	BANQUE NATIONALE DE PARIS[10]
10	14	MITSUBISHI TRUST & BANKING[4,7]
11	12	DEUTSCHE BANK[11]
12	9	TOKAI BANK[7]
13	13	CRÉDIT LYONNAIS[10]
14	20	BARCLAYS BANK
15	17	NATIONAL WESTMINSTER BANK
16	10	MITSUI BANK[7,9]
17	16	SUMITOMO TRUST & BANKING[4]
18	19	SOCIÉTÉ GÉNÉRALE
19	15	LONG-TERM CREDIT BANK OF JAPAN[6]
20	22	MITSUI TRUST & BANKING[4,9]
21	21	BANK OF TOKYO[7]
22	18	TAIYO KOBE BANK[3]
23	24	YASUDA TRUST & BANKING[4,7]
24	25	DRESDNER BANK[11]
25	23	DAIWA BANK[5,7]
26	27	UNION BANK OF SWITZERLAND[2]
27	26	CIE FINANCIÈRE DE PARIBAS
28	•	BANK OF CHINA[10]
29	29	SWISS BANK CORP.[1]
30	30	TOYO TRUST & BANKING[4,7]
31	28	HONGKONG & SHANGHAI BANKING
32	34	COMMERZBANK[11]
33	33	WESTDEUTSCHE LANDESBANK[11]
34	35	BANCA NAZIONALE DEL LAVORO[10]
35	31	NIPPON CREDIT BANK[6,7]
36	37	BAYERISCHE VEREINSBANK[11]
37	32	MIDLAND BANK
38	36	KYOWA BANK[5,7]
39	40	ALGEMENE BANK NEDERLAND
40	39	LLOYDS BANK
41	43	CRÉDIT SUISSE[2]
42	49	BAYERISCHE LANDESBANK[11]
43	42	RABOBANK
44	44	AMSTERDAM-ROTTERDAM BANK
45	50	DEUTSCHE GENOSSENSCHAFTSBANK[11]
46	47	BAYERISCHE HYPOTHEKEN & WECHSEL[11]
47	45	SAITAMA BANK[5,7]
48	38	ROYAL BANK OF CANADA[12]
49	52	SHOKO CHUKIN BANK[7,10]
50	41	BANCO DO BRASIL[10]

COUNTRY	ASSETS[1]			DEPOSITS[2]		LOANS[3]	NET INCOME[4]	STOCK-HOLDERS' EQUITY[5]	OFFICES[6]	EMPLOY-EES
	$ Millions	Percent change in U.S. dollars	Percent change in local currency	$ Millions	Rank	$ Millions	$ Millions	$ Millions	Number	Number
JAPAN	288,337.3	14.6	8.8	211,084.0	1	160,414.6	627.9	4,823.2	386	19,293
JAPAN	270,212.1	26.0	19.6	194,108.0	2	146,570.6	352.0	5,237.7	371	16,610
JAPAN	263,069.1	19.6	13.5	187,037.5	3	144,588.4	547.8	5,122.7	305	14,805
JAPAN	245,333.0	17.2	11.3	177,660.4	4	135,738.5	635.9	4,842.5	250	14,296
JAPAN	238,109.4	18.9	12.8	174,823.6	6	140,834.6	555.6	4,377.6	287	14,827
JAPAN	222,463.3	33.1	26.3	175,630.6	5	115,773.6	375.2	5,172.4	32	5,363
FRANCE	214,864.6	37.5	14.9	151,101.4	9	166,544.7	359.0	5,956.8	9,993	73,939
JAPAN	186,334.3	33.7	9.7	168,173.6	7	82,634.3	140.5	958.0	39	3,163
FRANCE	183,086.3	27.5	6.5	128,364.5	15	136,530.0	471.5	4,653.4	2,574	58,452
JAPAN	173,398.8	30.9	24.2	141,951.0	11	75,932.8	442.4	2,562.2	61	6,164
W. GERMANY	170,831.1	27.7	4.3	153,952.6	8	137,212.0	366.0	7,160.1	1,498	54,579
JAPAN	169,341.1	18.8	12.8	128,490.5	14	91,455.9	298.8	3,007.1	246	12,795
FRANCE	168,723.0	26.2	5.4	123,624.4	17	124,737.4	369.8	4,448.0	N.A.	58,181
BRITAIN	165,564.4	41.5	11.2	139,301.8	12	139,533.8	22.9	7,766.5	4,200	113,200
BRITAIN	164,132.9	32.9	4.4	144,003.6	10	141,146.4	724.5	9,235.7	3,735	102,000
JAPAN	163,254.2	16.5	10.6	120,091.9	19	93,659.9	336.3	2,883.6	260	10,292
JAPAN	154,276.9	23.9	17.6	136,253.4	13	67,054.7	422.7	2,437.9	64	6,187
FRANCE	153,367.0	30.6	9.1	112,539.4	21	117,433.2	445.8	2,743.3	2,200	43,980
JAPAN	152,196.6	21.0	14.9	117,152.4	20	92,534.5	327.8	3,284.7	28	3,394
JAPAN	150,620.7	30.4	23.8	127,814.4	16	65,887.4	317.4	1,828.6	68	6,030
JAPAN	145,270.0	25.4	2.8	102,452.0	26	75,256.9	345.1	3,010.8	250	13,397
JAPAN	144,954.4	19.8	13.8	109,729.7	23	89,693.0	254.1	2,309.3	365	13,737
JAPAN	132,447.1	27.5	21.0	109,845.2	22	60,848.9	255.1	1,544.1	61	5,372
W. GERMANY	131,740.7	28.7	5.1	122,085.7	18	106,697.0	249.8	4,062.3	1,403	38,116
JAPAN	130,389.0	23.6	17.4	109,576.6	24	67,176.6	212.9	2,135.3	200	9,411
SWITZERLAND	126,162.7	33.8	5.4	106,471.8	25	102,158.5	504.7	7,665.2	269	20,881
FRANCE	122,550.7	29.8	8.5	75,101.9	39	89,196.3	286.9	3,334.5	N.A.	27,500
CHINA	118,445.5	28.1	28.1	52,546.0	58	43,639.8	1,079.3	4,544.4	522	31,000
SWITZERLAND	114,974.3	34.6	6.1	97,636.6	27	91,919.3	437.3	6,890.1	232	16,828
JAPAN	111,027.5	33.6	26.8	96,238.8	29	52,136.0	232.1	1,333.2	63	4,825
HONG KONG	107,884.6	17.5	17.1	96,009.8	30	55,038.8	460.7	4,290.0	1,300	51,950
W. GERMANY	102,960.9	33.7	9.2	96,795.3	28	85,805.3	234.2	3,376.6	882	26,640
W. GERMANY	97,086.7	26.0	2.9	89,819.6	31	78,166.8	56.0	2,608.4	18	7,531
ITALY	96,837.9	27.6	10.6	81,898.3	33	69,108.6	104.1	3,328.4	446	28,602
JAPAN	96,774.6	18.7	12.6	77,583.4	35	59,172.3	175.4	1,713.5	24	2,214
W. GERMANY	95,259.1	30.8	6.8	89,324.4	32	82,805.3	121.8	2,113.1	463	14,270
BRITAIN	91,376.7	15.9	(8.9)	78,606.6	34	74,578.1	(644.2)	4,877.2	2,080	58,778
JAPAN	91,118.5	22.1	15.8	69,693.1	44	53,413.3	221.9	1,948.1	237	8,727
NETHERLANDS	85,374.1	26.5	2.9	75,946.8	37	49,778.2	255.2	3,307.9	940	29,314
BRITAIN	84,700.3	19.5	(6.1)	76,549.0	36	71,939.6	(372.1)	4,509.4	3,070	76,186
SWITZERLAND	84,341.2	31.2	3.4	71,775.3	43	65,952.4	368.9	5,200.8	202	15,020
W. GERMANY	83,601.9	39.3	13.7	69,668.5	45	66,493.3	81.5	1,834.7	7	4,362
NETHERLANDS	82,362.8	28.1	4.2	75,552.3	38	59,953.0	341.6	4,744.2	3,364	32,646
NETHERLANDS	81,454.4	27.3	3.5	73,403.5	42	41,152.2	236.4	2,890.2	798	23,709
W. GERMANY	81,115.4	39.4	13.8	73,524.7	41	64,856.9	77.1	1,777.5	23	4,717
W. GERMANY	80,394.5	28.5	4.9	74,767.8	40	71,622.8	135.1	2,333.0	489	13,171
JAPAN	79,167.3	25.8	19.4	61,143.5	49	44,775.8	160.9	1,680.0	205	8,834
CANADA	77,625.1	8.4	2.6	65,196.0	47	52,645.9	(193.3)	3,315.5	1,517	42,839
JAPAN	76,241.7	32.4	8.6	68,299.5	46	61,286.6	40.6	1,789.5	97	6,408
BRAZIL	75,707.8	12.7	446.4	26,343.0	93	67,354.4	759.8	5,173.3	3,689	128,528

THE 100 BIGGEST COMMERCIAL BANKING COMPANIES

RANK BY ASSETS 1987	1986	COMPANY	COUNTRY	ASSETS[1] $ Millions	Percent change in U.S. dollars	Percent change in local currency	DEPOSITS[2] $ Millions	Rank	LOANS[3] $ Millions	NET INCOME[4] $ Millions
51	48	ISTITUTO BANCARIO SAN PAOLO DI TORINO[10]	ITALY	74,066.1	23.3	6.8	57,985.5	53	33,723.3	435.9
52	62	CHUO TRUST & BANKING[8,9]	JAPAN	69,767.6	42.8	35.6	63,563.4	48	24,014.8	77.6
53	55	BANK OF YOKOHAMA[8,9]	JAPAN	67,445.2	25.2	18.8	52,713.2	57	40,962.5	116.5
54	51	CANADIAN IMPERIAL BANK OF COMMERCE[12]	CANADA	67,144.0	15.5	9.3	54,711.8	56	48,312.8	(47.3)
55	59	GÉNÉRALE DE BANQUE	BELGIUM	66,113.8	27.5	4.7	60,969.8	50	44,436.9	172.4
56	68	ZENSHINREN BANK[7]	JAPAN	65,090.1	52.8	25.3	59,733.8	52	36,245.1	144.4
57	60	CARIPLO	ITALY	65,019.1	27.4	10.3	51,625.1	59	29,767.7	185.3
58	61	NORDDEUTSCHE LANDESBANK[10,11]	W. GERMANY	64,978.1	29.5	5.8	59,824.2	51	56,889.9	34.2
59	58	CIE FINANCIÈRE DE SUEZ	FRANCE	64,534.4	23.5	3.2	37,972.7	74	43,918.7	354.9
60	46	BANK OF MONTREAL[12]	CANADA	63,993.1	2.1	(3.4)	54,766.9	54	39,931.8	(263.4)
61	53	BANCA COMMERCIALE ITALIANA[10]	ITALY	63,040.3	13.4	(1.7)	54,731.1	55	42,659.7	279.3
62	67	CRÉDIT INDUSTRIEL ET COMMERCIAL[10]	FRANCE	63,010.4	43.2	19.7	43,353.8	67	43,250.8	102.0
63	56	MONTE DEI PASCHI DI SIENA[10]	ITALY	62,967.4	17.4	1.7	51,603.6	60	50,827.0	244.3
64	54	HOKKAIDO TAKUSHOKU BANK[7,9]	JAPAN	61,670.7	13.3	7.6	46,547.2	64	32,915.7	91.4
65	66	BANCO DI NAPOLI[9,10]	ITALY	59,802.4	32.5	14.8	50,619.3	61	39,768.9	48.0
66	57	BANCO DI ROMA[10]	ITALY	56,813.1	7.7	(6.7)	48,674.1	62	41,480.2	5.3
67	63	STANDARD CHARTERED BANK	BRITAIN	56,077.0	17.4	(7.7)	48,022.5	63	40,556.7	(663.7)
68	65	BANK OF NOVA SCOTIA[12]	CANADA	54,269.7	17.9	11.6	46,194.4	65	36,528.9	(233.2)
69	70	GROUPE DES BANQUES POPULAIRES	FRANCE	53,878.2	35.9	13.5	36,655.2	75	36,797.9	165.0
70	69	BANK MELLI IRAN[10,13]	IRAN	53,380.6	29.5	14.5	38,520.5	73	N.A.	11.8
71	64	CREDITO ITALIANO[10]	ITALY	51,682.0	9.7	(5.0)	45,492.8	66	35,784.4	144.5
72	71	WESTPAC BANKING[5]	AUSTRALIA	49,852.4	30.8	15.8	30,042.1	83	30,682.3	280.9
73	74	HESSISCHE LANDESBANK[11]	W. GERMANY	47,379.9	29.2	5.5	38,924.0	71	35,294.2	32.6
74	72	STATE BANK OF INDIA[10]	INDIA	46,825.1	23.2	19.7	30,176.5	82	20,150.6	43.4
75	77	AUSTRALIA & NEW ZEALAND BANKING[5]	AUSTRALIA	46,291.7	30.2	15.3	27,026.9	91	24,850.7	273.9
76	78	NEDERLANDSCHE MIDDENSTANDSBANK	NETHERLANDS	45,356.5	37.8	12.1	41,916.2	68	30,681.9	109.1
77	80	CRÉDIT COMMUNAL DE BELGIQUE	BELGIUM	45,337.9	38.7	14.0	40,690.4	69	28,965.2	34.4
78	76	BANQUE FRANÇAISE DU COMMERCE	FRANCE	44,799.0	25.4	4.8	15,839.7	99	26,426.4	13.2
79	75	BANK BRUSSELS LAMBERT[6]	BELGIUM	43,607.6	20.7	9.7	38,630.2	72	16,209.9	93.8
80	83	CRÉDIT MUTUEL	FRANCE	43,477.6	39.6	16.6	33,126.9	79	28,640.3	172.9
81	79	CREDITANSTALT-BANKVEREIN[10,11]	AUSTRIA	42,269.9	28.8	5.1	39,939.5	70	22,864.3	41.7
82	82	ASLK-CGER	BELGIUM	41,627.8	33.5	9.7	34,898.6	77	40,258.1	79.5
83	73	TORONTO-DOMINION BANK[12]	CANADA	41,426.4	12.0	6.0	34,113.0	78	30,626.8	39.7
84	87	SKANDINAVISKA ENSKILDA BANKEN	SWEDEN	40,325.8	42.3	22.3	28,073.5	97	24,054.4	106.5
85	86	CHIBA BANK[9]	JAPAN	40,104.0	35.0	28.1	31,620.7	80	27,055.3	95.6
86	85	HOKURIKU BANK[9]	JAPAN	38,569.6	25.8	19.4	30,331.5	81	27,576.9	91.2
87	81	CRÉDIT COMMERCIAL DE FRANCE	FRANCE	38,395.1	18.4	(1.1)	27,088.2	90	27,092.0	72.0
88	84	BANK FÜR GEMEINWIRTSCHAFT[11]	W. GERMANY	37,753.1	21.3	(1.0)	35,225.5	76	29,437.7	56.1
89	•	TRUSTEES SAVINGS BANK GROUP[12]	BRITAIN	36,018.5	90.3	49.5	25,828.6	95	12,414.4	286.2
90	91	BANCO CENTRAL	SPAIN	35,237.7	32.1	8.3	26,252.0	94	15,518.3	260.6
91	•	SVENSKA HANDELSBANKEN	SWEDEN	34,954.4	50.5	29.4	27,422.8	89	18,382.1	103.3
92	88	SHIZUOKA BANK[8,9]	JAPAN	34,351.2	21.7	15.5	29,329.7	84	23,026.2	98.5
93	89	JOYO BANK[9]	JAPAN	34,032.3	21.1	15.0	28,945.9	85	24,354.2	88.2
94	92	NATIONAL AUSTRALIA BANK[5]	AUSTRALIA	33,293.4	25.1	10.8	18,509.2	98	26,188.5	220.9
95	96	SPARBANKERNAS BANK	SWEDEN	32,404.0	26.2	8.5	9,000.2	100	25,241.8	5.7
96	•	KREDIETBANK[7]	BELGIUM	31,893.6	56.1	21.3	28,592.9	86	18,570.8	85.5
97	95	ASHIKAGA BANK[9]	JAPAN	31,759.5	22.3	16.1	27,730.0	88	22,576.5	96.8
98	93	POST-OCH KREDITBANKEN[10]	SWEDEN	31,311.2	18.8	2.1	23,126.6	96	18,848.3	115.7
99	•	BANCO HISPANO AMERICANO	SPAIN	31,296.5	37.8	12.9	20,654.2	97	16,562.0	22.6
100	100	ROYAL BANK OF SCOTLAND[6]	BRITAIN	31,064.9	29.4	15.2	26,972.3	92	26,438.9	199.7
		TOTALS		9,362,623.6			7,400,952.3		5,948,580.1	19,738.6

	STOCKHOLDERS' EQUITY[5] $ Millions	OFFICES[6] Number	EMPLOYEES Number
	3,182.7	681	18,234
	411.1	55	4,037
	1,581.2	206	6,984
	3,232.5	1,534	33,874
	1,448.8	1,157	15,875
	951.1	17	953
	3,604.4	523	14,293
	1,301.3	213	6,200
	3,526.0	607	18,702
	2,630.7	1,220	34,482
	3,389.4	550	21,524
	1,555.5	1,425	27,000
	3,351.9	775	16,659
	989.9	223	6,310
	1,008.9	504	13,631
	1,414.9	370	14,904
	1,352.8	807	33,422
	2,141.3	1,170	26,187
	1,639.1	1,851	28,445
	2,505.4	2,000	19,953
	2,552.2	501	17,333
	2,116.3	1,953	44,947
	938.5	7	2,802
	834.3	11,361	284,802
	2,224.7	1,690	41,187
	1,296.0	486	11,844
	700.0	1,351	3,532
	232.6	30	2,765
	830.2	1,000	15,784
	2,132.9	4,400	21,620
	1,596.5	343	10,110
	1,170.8	1,139	10,187
	2,634.4	963	21,710
	735.8	347	9,149
	1,157.1	165	5,050
	1,045.1	184	5,233
	747.6	416	12,314
	1,312.5	279	8,960
	4,141.4	1,620	32,050
	1,670.2	2,856	24,073
	441.6	451	6,447
	1,370.4	192	5,556
	1,120.4	158	5,135
	2,036.1	1,661	24,333
	119.1	1	1,211
	760.6	853	11,042
	1,061.0	146	4,311
	457.6	138	4,653
	1,404.3	1,410	15,044
	1,708.2	856	19,557
	269,910.0		2,389,292

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	RANK	
POST-OCH KREDITBANKEN	98	25.3%
BANK OF CHINA	28	23.8
SVENSKA HANDELSBANKEN	91	23.4
CHUO TRUST & BANKING	52	18.9
TOYO TRUST & BANKING	30	17.4
MITSUI TRUST & BANKING	20	17.4
SUMITOMO TRUST & BANKING	17	17.3
MITSUBISHI TRUST & BANKING	10	17.3
YASUDA TRUST & BANKING	23	16.5
CIE FINANCIÈRE DE PARIBAS	27	16.4
THE MEDIAN		8.4

CHANGE IN NET INCOME

THE TEN BIGGEST INCREASES*

	RANK	
POST-OCH KREDITBANKEN	98	223.7%
SPARBANKERNAS BANK	95	211.0
BANK FÜR GEMEINWIRTSCHAFT	88	177.2
BANCO DO BRASIL	50	173.7
AUSTRALIA & NEW ZEALAND	75	144.2
SKANDINAVISKA ENSKILDA	84	126.6
NORDDEUTSCHE LANDESBANK	58	103.4
TAIYO KOBE BANK	22	91.6
KYOWA BANK	38	87.6
YASUDA TRUST & BANKING	23	82.2

THE TEN BIGGEST DECREASES*

BARCLAYS BANK	14	96.8%
BANCO DI ROMA	66	92.9
TORONTO-DOMINION BANK	83	86.3
BANCO HISPANO AMERICANO	99	79.3
BANK MELLI IRAN	70	68.1
BANCA NAZIONALE DEL LAVORO	34	45.3
SUMITOMO BANK	2	34.2
DEUTSCHE BANK	11	24.7
CREDITO ITALIANO	71	22.3
CRÉDIT INDUSTRIEL	62	21.2

*Percent increase or decrease of net income. Does not include money losers.

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	RANK	
ZENSHINREN BANK	56	$68,300,212
NORINCHUKIN BANK	8	58,910,623
LONG-TERM CREDIT BANK	19	44,842,841
NIPPON CREDIT BANK	35	43,710,292
INDUSTRIAL BANK OF JAPAN	6	41,481,138
MITSUBISHI TRUST & BANK	10	28,130,889
SPARBANKERNAS BANK	95	26,758,026
MITSUI TRUST & BANKING	20	24,978,565
SUMITOMO TRUST & BANKING	17	24,935,657
YASUDA TRUST & BANKING	23	24,655,080

THE FIVE LOWEST

TRUSTEES SAVINGS BANK	89	1,123,823
LLOYDS BANK	40	1,111,756
WESTPAC BANKING	72	1,109,137
BANCO DO BRASIL	50	589,037
STATE BANK OF INDIA	74	164,413
THE MEDIAN		$4,387,239

FOOTNOTES TO THE BANKS

- • Not on last year's list.
- N.A. Not available.
- [1] Asset figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end, which is December 31, 1987, unless otherwise noted. Chuo Trust, Daiwa, Mitsubishi Trust, Mitsui Trust, Sumitomo Trust, Toyo Trust, and Yasuda Trust include holdings of major trusts in their assets.
- [2] Deposit figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Figures for West German banks include their own bonds; so do figures for Bank of Tokyo, Industrial Bank of Japan, Long-Term Credit Bank of Japan, and Norinchunkin Bank.
- [3] Loan figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Figures include loans to banks and money at call or available on short notice.
- [4] Net income figures have been converted into U.S. dollars using the average rate in the official exchange market during the bank's fiscal year. Net income is after taxes and excludes minority interest.
- [5] Stockholders' equity figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Equity is the sum of capital stock, surplus, and retained earnings.
- [6] Includes main office, branches, and agencies.
- [7] Figures are for fiscal year ended March 31, 1987.
- [8] Figures are for fiscal year ended September 30, 1987.
- [9] Figures are for parent company only.
- [10] Government-owned.
- [11] Excludes some subsidiaries more than 50% owned.
- [12] Figures are for fiscal year ended October 31, 1987.
- [13] Figures are for fiscal year ended March 20, 1987.

THE BANKS BY COUNTRY

	1-50	51-100	Total	Largest company	Assets $millions	Rank
AUSTRALIA	0	3	3	WESTPAC BANKING	49,852.4	72
AUSTRIA	0	1	1	CREDITANSTALT-BANKVEREIN	42,269.9	81
BELGIUM	0	5	5	GÉNÉRALE DE BANQUE	66,113.8	55
BRAZIL	1	0	1	BANCO DO BRASIL	75,707.8	50
BRITAIN	4	3	7	BARCLAYS BANK	165,564.4	14
CANADA	1	4	5	ROYAL BANK OF CANADA	77,625.1	48
CHINA	1	0	1	BANK OF CHINA	118,445.5	28
FRANCE	5	6	11	CRÉDIT AGRICOLE	214,864.6	7
HONG KONG	1	0	1	HONGKONG & SHANGHAI BANKING	107,884.6	31
INDIA	0	1	1	STATE BANK OF INDIA	46,825.1	74
IRAN	0	1	1	BANK MELLI IRAN	53,380.6	70
ITALY	1	7	8	BANCA NAZIONALE DEL LAVORO	96,837.9	34
JAPAN	22	9	31	DAI-ICHI KANGYO BANK	288,337.3	1
NETHERLANDS	3	1	4	ALGEMENE BANK NEDERLAND	85,374.1	39
SPAIN	0	2	2	BANCO CENTRAL	35,237.7	90
SWEDEN	0	4	4	SKANDINAVISKA ENSKILDA BANKEN	40,325.8	84
SWITZERLAND	3	0	3	UNION BANK OF SWITZERLAND	126,162.7	26
W. GERMANY	8	3	11	DEUTSCHE BANK	170,831.1	11

INDEX TO THE BIGGEST COMMERCIAL BANKING COMPANIES OUTSIDE THE U.S.

Company	Rank
ALGEMENE BANK NEDERLAND	39
AMSTERDAM-ROTTERDAM BANK	44
ASHIKAGA BANK	97
ASLK-CGER	82
AUSTRALIA & NEW ZEALAND BANKING	75
BANCA COMMERCIALE ITALIANA	61
BANCA NAZIONALE DEL LAVORO	34
BANCO CENTRAL	90
BANCO DI NAPOLI	65
BANCO DI ROMA	66
BANCO DO BRASIL	50
BANCO HISPANO AMERICANO	99
BANK FÜR GEMEINWIRTSCHAFT	88
BANK MELLI IRAN	70
BANK OF CHINA	28
BANK OF MONTREAL	60
BANK OF NOVA SCOTIA	68
BANK OF TOKYO	21
BANK OF YOKOHAMA	53
BANQUE BRUXELLES LAMBERT	79
BANQUE FRANÇAISE DU COMMERCE	78
BANQUE NATIONALE DE PARIS	9
BARCLAYS BANK	14
BAYERISCHE VEREINSBANK	36
BAYERISCHE LANDESBANK	42
BAYERISCHE HYPOTHEKEN & WECHSEL	46
CANADIAN IMPERIAL BANK OF COMMERCE	54
CARIPLO	57
CHIBA BANK	85
CHUO TRUST & BANKING	52
CIE FINANCIÈRE DE SUEZ	59
CIE FINANCIÈRE DE PARIBAS	27
COMMERZBANK	32
CREDITANSTALT-BANKVEREIN	81
CRÉDIT AGRICOLE	7
CRÉDIT COMMERCIAL DE FRANCE	87
CRÉDIT COMMUNAL DE BELGIQUE	77
CRÉDIT INDUSTRIEL ET COMMERCIAL	62
CRÉDIT LYONNAIS	13
CRÉDIT MUTUEL	80
CRÉDIT SUISSE	41
CREDITO ITALIANO	71
DAI-ICHI KANGYO BANK	1
DAIWA BANK	25
DEUTSCHE GENOSSENSCHAFTSBANK	45
DEUTSCHE BANK	11
DRESDNER BANK	24
FUJI BANK	3
GÉNÉRALE DE BANQUE	55
GROUPE DES BANQUES POPULAIRES	69
HESSISCHE LANDESBANK	73
HOKKAIDO TAKUSHOKU BANK	64
HOKURIKU BANK	86
HONGKONG & SHANGHAI BANKING	31
INDUSTRIAL BANK OF JAPAN	6
ISTITUTO BANCARIO SAN PAOLO DI TORINO	51
JOYO BANK	93
KREDIETBANK	96
KYOWA BANK	38
LLOYDS BANK	40
LONG-TERM CREDIT BANK OF JAPAN	19
MIDLAND BANK	37
MITSUBISHI BANK	4
MITSUBISHI TRUST & BANKING	10
MITSUI BANK	16
MITSUI TRUST & BANKING	20
MONTE DEI PASCHI DI SIENA	63
NATIONAL AUSTRALIA BANK	94
NATIONAL WESTMINSTER BANK	15
NEDERLANDSCHE MIDDENSTANDSBANK	76
NIPPON CREDIT BANK	35
NORDDEUTSCHE LANDESBANK	58
NORINCHUKIN BANK	8
POST-OCH KREDITBANKEN	98
RABOBANK	43
ROYAL BANK OF CANADA	48
ROYAL BANK OF SCOTLAND	100
SAITAMA BANK	47
SANWA BANK	5
SHIZUOKA BANK	92
SHOKO CHUKIN BANK	49
SKANDINAVISKA ENSKILDA BANKEN	84
SOCIÉTÉ GÉNÉRALE	18
SPARBANKERNAS BANK	95
STANDARD CHARTERED BANK	67
STATE BANK OF INDIA	74
SUMITOMO BANK	2
SUMITOMO TRUST & BANKING	17
SVENSKA HANDELSBANKEN	91
SWISS BANK CORP.	29
TAIYO KOBE BANK	22
TOKAI BANK	12
TORONTO-DOMINION BANK	83
TOYO TRUST & BANKING	30
TRUSTEES SAVINGS BANK GROUP	89
UNION BANK OF SWITZERLAND	26
WESTDEUTSCHE LANDESBANK	33
WESTPAC BANKING	72
YASUDA TRUST & BANKING	23
ZENSHINREN BANK	56

A SIGH OF RELIEF

Considering all the things that could have gone wrong, 1988 is shaping up remarkably well for the major industrial economies. Most are likely to keep growing at a slow but solid pace for the sixth year in a row. The October shock heard 'round the world didn't unravel the financial system or provoke a concatenation of recessions. And the dollar didn't tank, an event that also could have had grave consequences. Trade tensions did not flare into outright war.

The crash may even have left the world a little better off—there's nothing like a good scare to pull folks together. Laying aside their squabbles, the so-called Group of Seven industrial powers immediately agreed to agree. Concerted efforts helped keep the dollar reasonably stable during the winter, and the words of good will the group issued at the June Toronto economic summit carried more weight than the usual boilerplate.

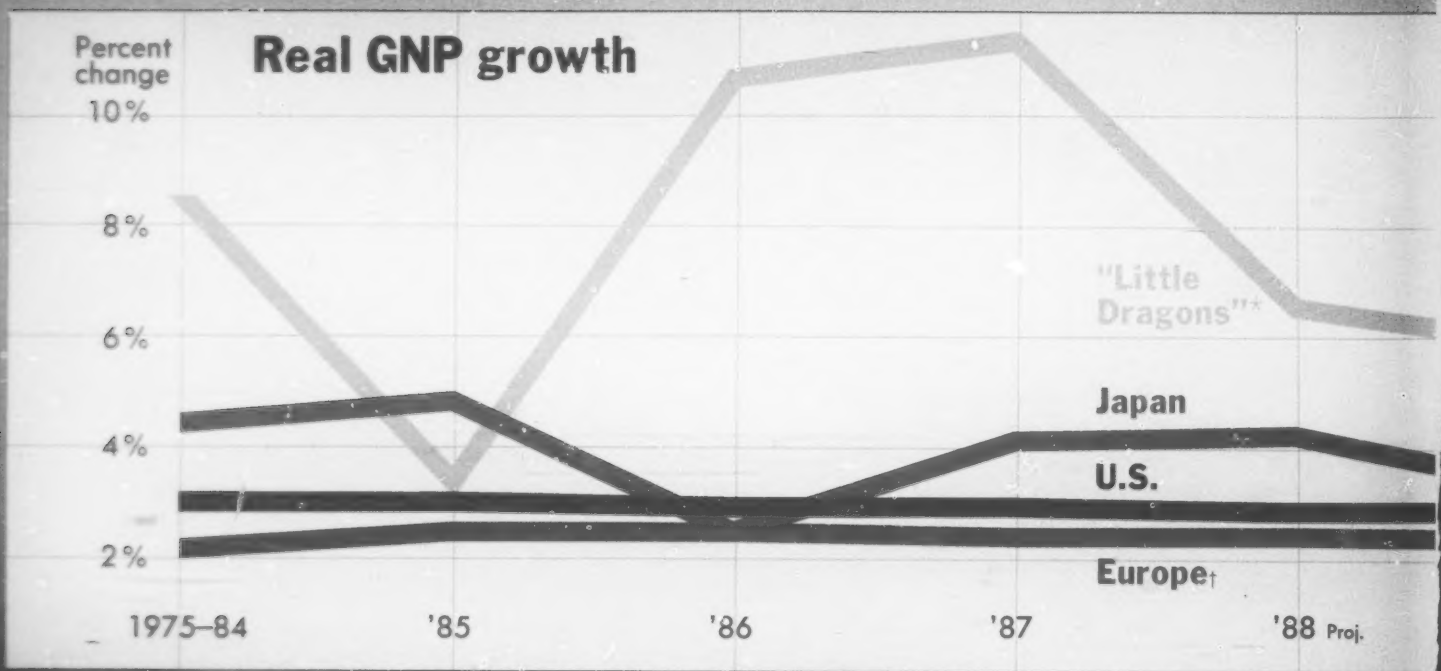
Still, policy coordination works only at the margin, and the brighter picture mainly reflects changing economic fundamentals—notably the weaker dollar. Booming U.S. exports, accompanied by slower growth in domestic demand, have begun to shrink the immense U.S. trade deficit and nibble at the West German and Japanese surpluses. The one country that followed the G7's broad prescriptions was Japan—which had its own reasons for reshaping its growth strategy. Faced with a newly powerful yen, the government pumped up domestic demand with tax breaks and expansive fiscal policy. At the same time, industry restructured and began farming out production to other Asian countries. West Germany, by contrast, transfixed by fears of inflation, resisted the G7's invitation to grow faster.

Britain, the former old man of Europe, looked more like one of Asia's "Little Dragons"—South Korea, Taiwan, Hong Kong, and Singapore—as a surge in manufacturing productivity and dynamic consumer demand boosted growth. Alas, this *joie de vivre* created a too hearty appetite for imports. By year's end Britain's current account deficit was more than 2½ times its 1986 level.

This year looks only a little better for developing countries burdened by past borrowing and economic mismanagement. Creative contrivances such as debt-for-equity swaps are providing incremental help, but long-term solutions remain elusive. Maybe next year. — Rahul Jacob

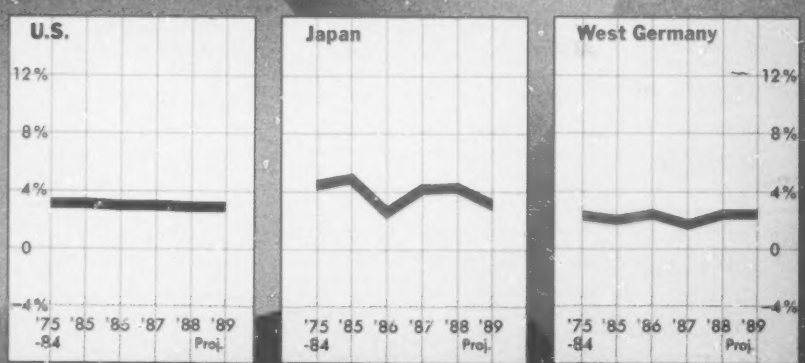
FIGURES SUPPLIED BY DATA RESOURCES

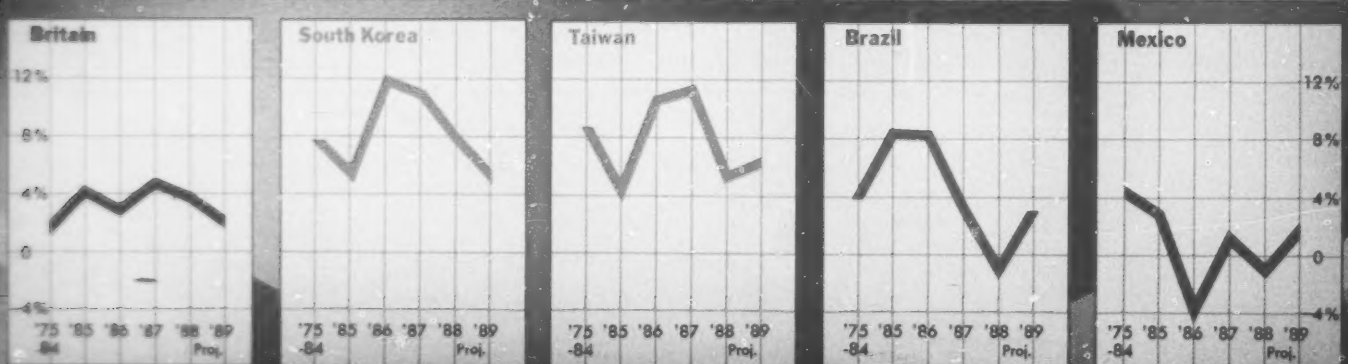
THE ECONOMIES

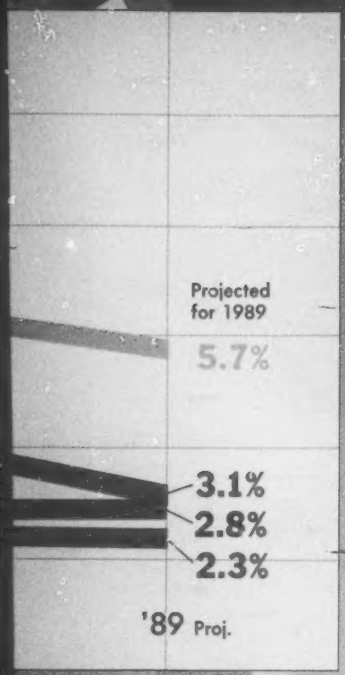


Real GNP Growth

■ Asia's fast-moving "Little Dragons" remain at the head of the pack, but their progress will slow sharply this year as exports slacken. GNP growth rates are converging for Japan and the U.S. but have diverged within the European community. Britain's 4.7% spurt last year left the others gaping, and even this year's slower rate will be half again as fast as that of West Germany. The Germans have boosted their growth, but are still a great disappointment to trading partners who want Germany to resume its old role as engine for the rest of Europe.

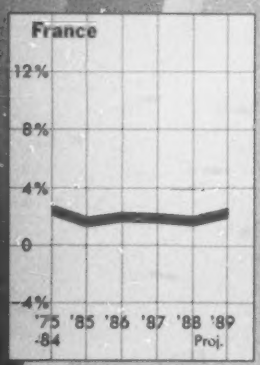


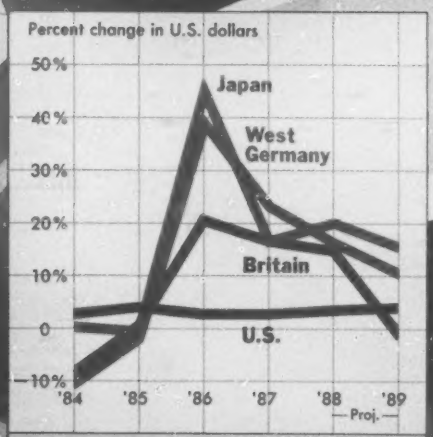




Unemployment

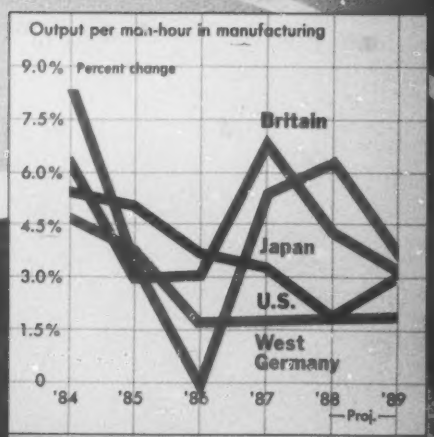
■ The U.S. keeps churning out new jobs; last winter unemployment fell to a 14-year low. Britain's rate, unlike most others in Europe, is heading down.





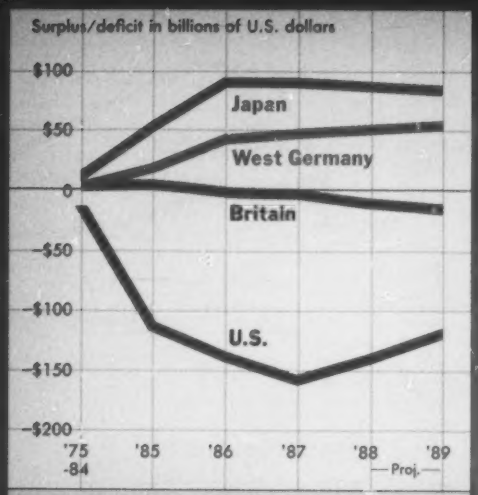
Unit Labor Costs

■ The weak dollar has driven competitors' relative unit labor costs skyward, helping to make the U.S. the world's low-cost producer in many industries.



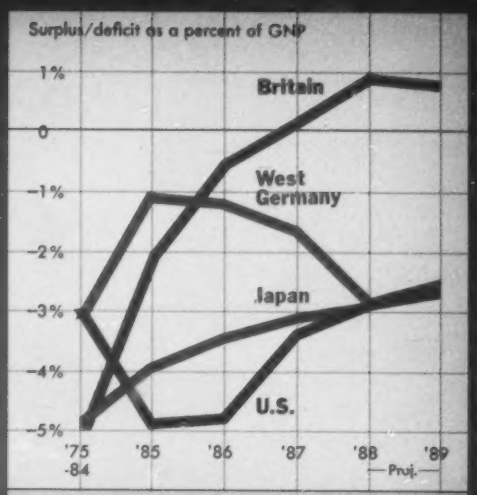
Productivity

■ Britain's burst of productivity reflects a dramatically slimmed manufacturing work force. The U.S. rate is climbing faster in 1988 than the IMF has projected.



Current Accounts

■ Still in its own league as a debtor, the U.S. has nonetheless begun to chip away at its monster trade deficit. Britain's rising exports cannot catch up with the flood of imports sucked in by exuberant consumer demand.

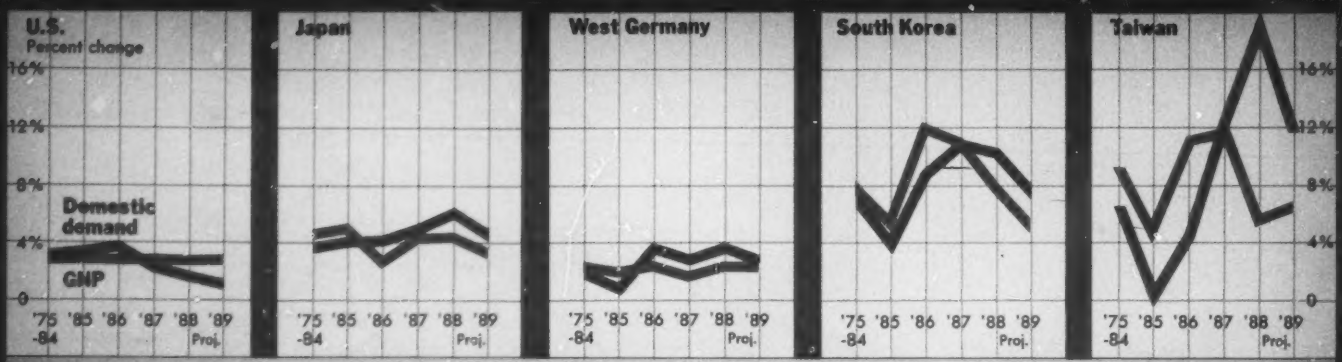


Government Budgets

■ Following supply-side remedies, Britain has piled up a big surplus while chopping taxes. Japan has lowered taxes too, and cut its deficit. Trading partners still doubt the U.S.'s long-term resolve for budget reduction.

Shares of World Trade

■ The new U.S. export surge is on its way to surpassing the boom of the 1970s in terms of physical volume, but imports are only beginning to shrink from their peak levels. West Germany is taking the biggest hit as an exporter. A strong currency is not necessarily a disadvantage. Japan just

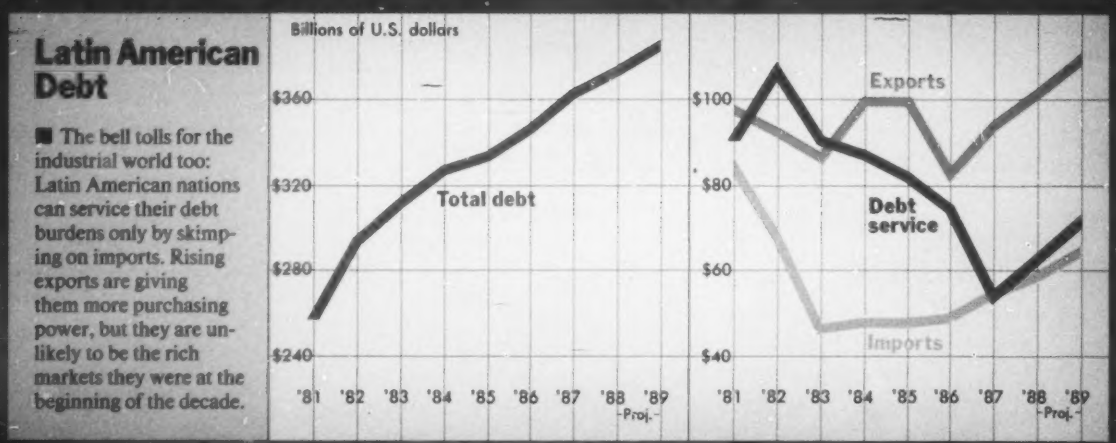


Total Output vs. Domestic Demand

■ The weaker dollar is rearranging economies around the world. GNP is growing faster than domestic demand in the U.S. as exports surge, while newly prosperous consumers in such countries as South Korea and Taiwan go shopping. Germany's demand, stimulated by a 1987 tax cut, will slow next year.

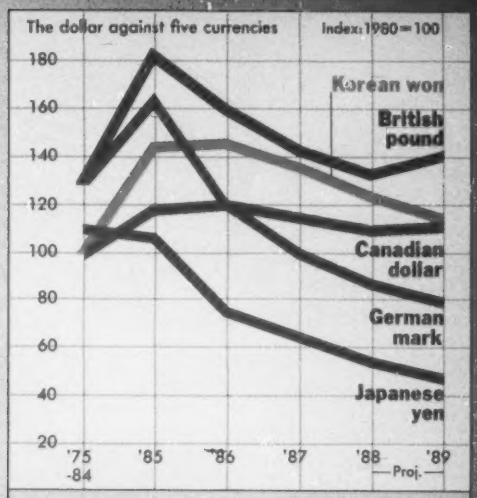
Latin American Debt

■ The bell tolls for the industrial world too: Latin American nations can service their debt burdens only by skimping on imports. Rising exports are giving them more purchasing power, but they are unlikely to be the rich markets they were at the beginning of the decade.



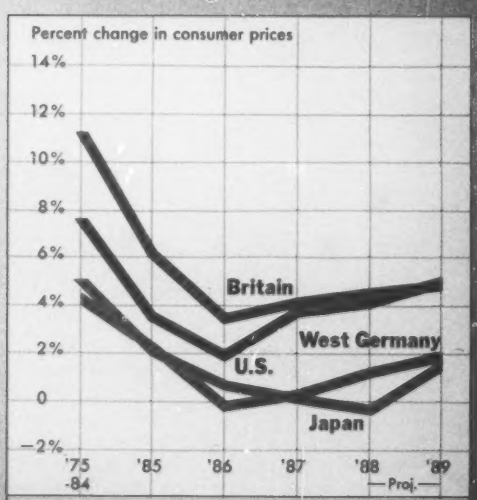
can't help staying competitive: It is paying less for oil and other raw materials, as well as for goods it buys from the "Little Dragons." As it subcontracts more and more manufacturing to them, the low-cost components they supply are showing up in Japanese products sold to other countries. Effectively, Japan is exporting part of its trade surplus to other Asian countries.

MEASURES OF



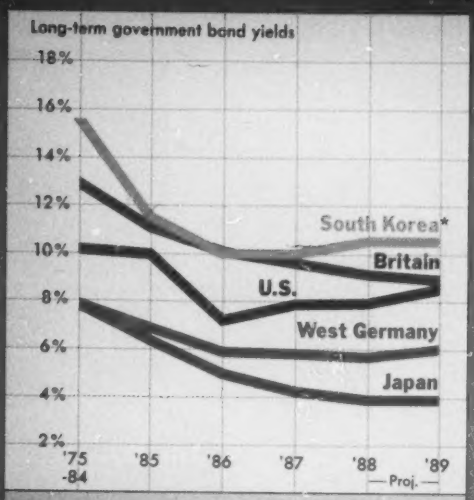
The Dollar

■ After a roller-coaster ride for most of the decade, the dollar seems to have settled down. But the pound is headed for a fall because of Britain's rising trade deficit. Responding to arm-twisting by the U.S. and other Western nations, South Korea has let the won rise.



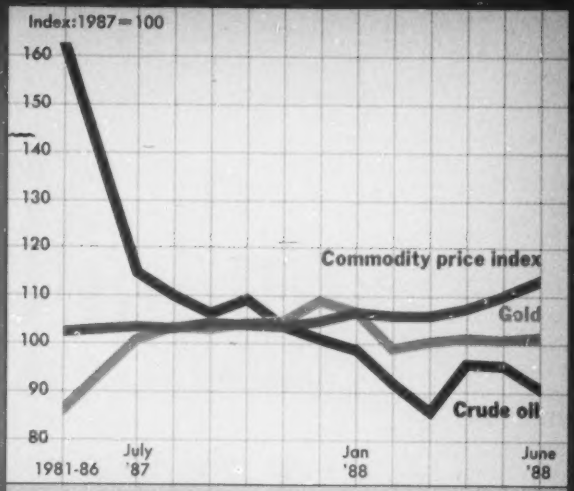
Inflation

■ The era of disinflation is over—commo prices are rising, European money supplies are growing rapidly, and wage demands are putting upward pressure on U.S. rates. But there's no sign of the spiraling inflation that made the Seventies a global nightmare.



Interest Rates

■ Though higher inflation will nudge interest rates up in the coming year, other forces, notably the declining U.S. trade deficit, are limiting the rise. Rates remain well below their peaks, suggesting that the financial markets are not looking for markedly higher inflation.

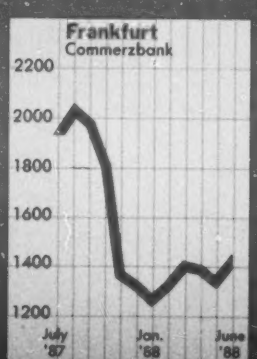


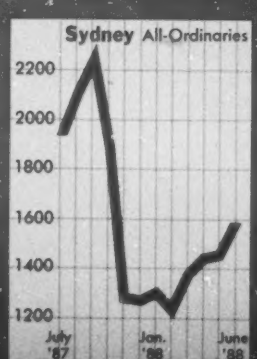
Commodities

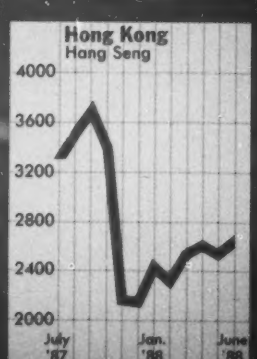
■ After two years of lethargy, commodity prices have been full of bounce since mid-1987. The U.S. drought will push farm prices still higher, an unexpected boon for the developing world. Oil prices are down, and demand for other commodities, especially metals, may not be strong enough to keep prices rising at the rate of the past year.

Stock Markets

■ It's One World of capital flows today. From Sydney to Singapore and from New York to Paris, nearly all the world's stock markets seemed to move in harmony last year save for the Tokyo market, which is tightly controlled by the Japanese government. Ironically, the capital that has fortified those stock markets in recent years came from investors seeking to diversify their risks. Now, because of the immense flows, the many markets are more likely to move in tandem—wiping out the sought-for diversity.







Buying Into America

IS THE REST of the world gobbling up America? Direct foreign investment is huge—$261 billion at last count—and it's growing, by almost 20% last year. The flow is close to surpassing the $308 billion that U.S. corporations have invested abroad over the past few decades. But those U.S. figures represent the outdated book value of plants purchased over several decades. Agood these assets may be, but senile they're not. Last year they earned $52.3 billion. By contrast, most foreign investment in the U.S. is fairly recent, and its market value is close to book value. Many of the ventures were also money losers or startups, and their owners are not yet making much on them—a mere $10.5 billion last year.

Though the spendthrift U.S. habits that give rise to the foreign investment are a problem, the investments themselves are not. Now earning an average of 4% to 5%, they are a cheaper way to finance the U.S.'s worrisome foreign debt than bonds yielding 9% to 10%. More important, the capital the U.S. exported in the past helped lay the foundation for global economic integration. The capital others export to the U.S. in the years to come will build on it. ■

Earnings Flows

■ Income from U.S. direct investment abroad is still five times the amount foreign companies take home. But foreign earnings are growing faster—a warning that the U.S. cannot indefinitely pull in capital from abroad.

Buyers of U.S. Treasuries

■ Led by West Germans, foreigners bought about 18% of all U.S. government securities in 1987. But private foreign investors deserted the marketplace as the dollar fell, and central banks had to pick up the slack until recently.